Product Puzzlers. Fill in each square with factors such that the product of each set of factors, horizontally and vertically, are correct. (2.22) ← check Level 2 Lesson 22 if you need a review

7	6	42
8	3	24
56	18	

9		63
		20
45	28	

2		12
		49
14	42	

6		30
		56
42	40	

11		44
		21
33	28	

4		8
		21
12	14	

8		72
		7
56	9	

3		6
		42
18	14	

8		64
		63
72	56	

7		49
		6
42	7	

12		60
		14
84	10	

4		12
		28
16	21	

5		20
		14
35	8	

11		66
		20
55	24	

9		27
		42
54	21	

6		12
		24
48	6	

3		15
		42
21	30	

12		72
		56
84	48	

7		21
		70
70	21	

12		96
		18
108	16	

9		63
		8
18	28	

7		56
		42
42	56	

8		56
		72
72	56	

5		25
		24
15	40	

4		20
		12
12	20	

3		15
		49
21	35	

12		72
		56
96	42	

6		54
		6
18	18	

#2 Date _____

Find the sums.

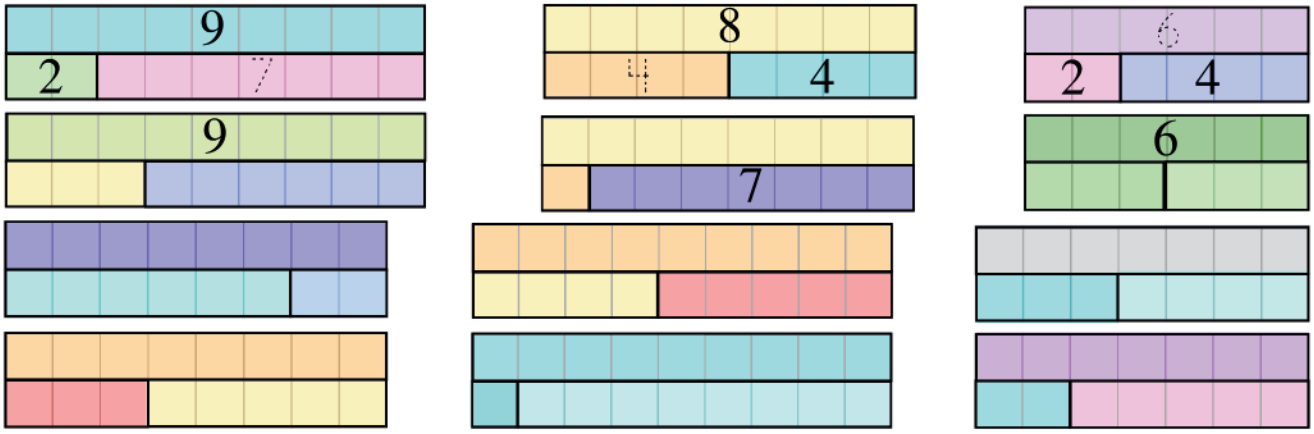
3 + 4 =	7 + 3 =	3 + 3 + 2 =	7 + 6 + 1 =
2 + 3 =	8 + 2 =	1 + 5 + 4 =	3 + 8 + 4 =
9 + 7 =	6 + 4 =	8 + 5 + 6 =	2 + 9 + 6 =
4 + 4 =	5 + 5 =	7 + 4 + 2 =	5 + 6 + 9 =

Find the differences.

8 - 4 =	6 - 2 =	10 - 1 - 4 =	9 - 7 - 2 =
9 - 3 =	10 - 4 =	10 - 8 - 2 =	7 - 3 - 1 =
7 - 7 =	8 - 5 =	8 - 5 - 2 =	10 - 2 - 4 =
5 - 4 =	10 - 1 =	10 - 6 - 3 =	6 - 3 - 2 =

check Level 1 Lesson 21
if you need a review

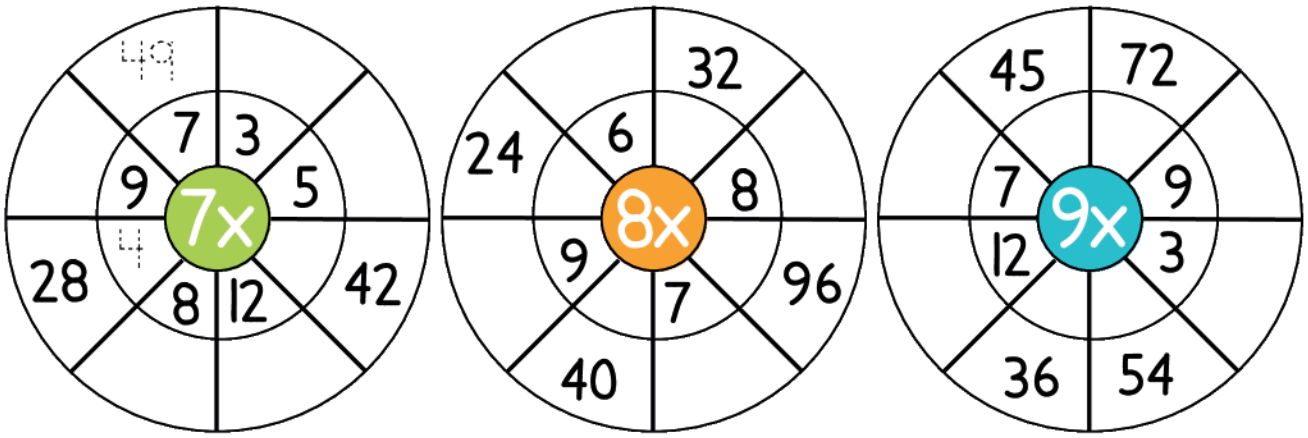
Find the missing PART and/or WHOLE in each addition fact family. (1.21)



Fill in the missing addends or sum to complete each number sentence. (3.36)

5 + ☐ = 11	1 + ☐ = 6	1 + 7 = ☐
☐ + 2 = 7	☐ + 1 = 9	☐ + 0 = 9
0 + ☐ = 9	2 + 8 = ☐	2 + ☐ = 8
4 + ☐ = 10	4 + ☐ = 5	3 + ☐ = 7

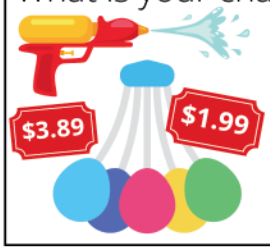
Fill in the blanks of these multiplication circles so that the outer circle is the PRODUCT of the middle circle and the innermost circle.



check Level 3 Lesson 45
if you need a review

Solve the problem. (3.45)

Draw the change.

You are going to buy the crayons and notebook. How much money do you have left after paying with a ten dollar bill?  	
You bought a squirt gun and some water balloons. What is your change after paying with a ten dollar bill?  	

Show 4 ways to make 79¢.

				total coins
3			4	7

Show 4 ways to make 56¢.

				total coins

Show 4 ways to make 88¢.

				total coins

#3 Date _____

Write a number sentence for each box as repeated addition then multiplication.

Each box holds a HALF DOZEN donuts.
How many donuts do you have?

6 + 6 + ___ + ___ = ____ ← repeated addition

4 X 6 = ____ ← multiplication

4 = number of boxes; 6 = donuts per box

Each bunch has THREE bananas.
How many bananas do you have?

3 + 3 + ___ + ___ + ___ + ___ = ____ ← repeated addition

____ X ____ = ____ ← multiplication

____ = number of bunches; ____ = bananas per bunch

Each hand has FIVE fingers. How many fingers are there?

5 + 5 + ___ + ___ + ___ + ___ + ___ = ____ ← repeated addition

____ X ____ = ____ ← multiplication

____ = number of hands; ____ = fingers per hand

Each bag has TEN seeds. How many seeds do you have?

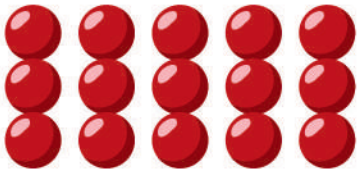
10 + ___ + ___ + ___ + ___ + ___ + ___ + ___ = ____ ← repeated addition

____ X ____ = ____ ← multiplication

____ = number of bags; ____ = seeds per bag

Complete the number sentence for each box. (2.43)

Divide these beads into five equal groups.
How many are in each group?



15 ÷ 5 =

Divide these marbles into three equal groups. How many are in each group?

18 ÷ 3 =

How much money is this? (2.51) check Level 2 Lesson 51 if you need a review

$___.____
dollars cents

$___.____
dollars cents

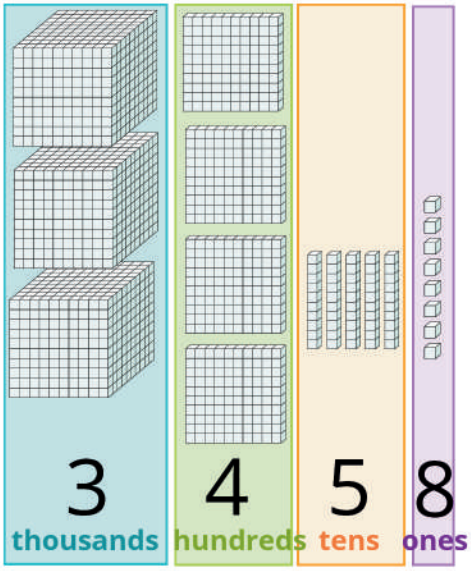
$___.____
dollars cents

$___.____
dollars cents

$___.____
dollars cents

Three thousand four hundred fifty-eight (3.1)

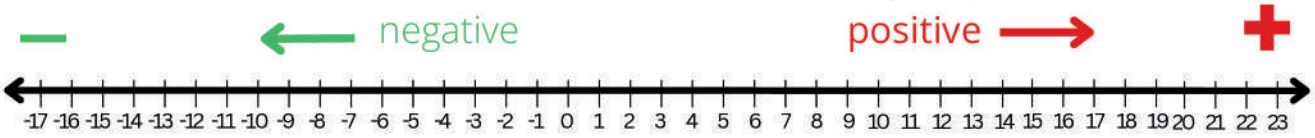
3000 + 400 + 50 + 8



All about the number 3,458:

1. How many ones are in this number? _____
2. How many hundreds are in this number? _____
3. How many thousands are in this number? _____
4. How many tens are in this number? _____
5. Which number is in the hundreds place? _____
6. Which number is in the thousands place? _____
7. Which number is in the ones place? _____

Use the number line to find each sum or difference. (3.58)



9 - 18 = ___	-2 + 13 = ___	1 - 10 = ___
11 - 0 = ___	8 - 16 = ___	10 - 1 = ___
-1 - 5 = ___	15 - 5 = ___	-1 - 10 = ___
-8 + 4 = ___	-12 + 6 = ___	-10 + 1 = ___

Fill in the missing parts to complete each number sentence. (3.36)

5 - ☐ = 11	-1 + ☐ = -6	9 - 16 = ☐
☐ - 2 = 4	☐ - 7 = 15	☐ - 0 = -13
0 - ☐ = -9	1 - 18 = ☐	-5 + ☐ = -10
3 + ☐ = 10	4 - ☐ = -5	3 + ☐ = -7

#4 Date _____

Find the sums without regrouping.

$$\begin{array}{r} 23 \\ +\ 13 \\ \hline 36 \end{array} \qquad \begin{array}{r} 41 \\ +\ 34 \\ \hline \square \end{array} \qquad \begin{array}{r} 23 \\ +\ 26 \\ \hline \end{array} \qquad \begin{array}{r} 25 \\ +\ 50 \\ \hline \end{array} \qquad \begin{array}{r} 65 \\ +\ 24 \\ \hline \end{array}$$

(23 ← part; 13 ← part; 36 ← whole; □ ← whole)

Check each sum by subtracting one PART from the WHOLE. The DIFFERENCE should be the other PART.

$$\begin{array}{r} 36 \\ -\ 13 \\ \hline 23 \end{array} \qquad \begin{array}{r} \square \\ -\ 34 \\ \hline \end{array} \qquad \begin{array}{r} \square \\ -\ 26 \\ \hline \end{array} \qquad \begin{array}{r} \square \\ -\ 50 \\ \hline \end{array} \qquad \begin{array}{r} \square \\ -\ 24 \\ \hline \end{array}$$

(36 ← whole; 13 ← part; 23 ← part; □ ← whole; does this difference match the other PART above?; □ ← whole; □ ← whole → □)

Find the sums with regrouping.

$$\begin{array}{r} 217 \\ +\ 153 \\ \hline \end{array} \qquad \begin{array}{r} 285 \\ +\ 345 \\ \hline \end{array} \qquad \begin{array}{r} 105 \\ +\ 195 \\ \hline \end{array} \qquad \begin{array}{r} 4133 \\ +\ 585 \\ \hline \end{array} \qquad \begin{array}{r} 1527 \\ +\ 3585 \\ \hline \end{array}$$

(217 ← part; 153 ← part; ← whole; hundreds tens ones; hundreds tens ones; hundreds tens ones; thousands hundreds tens ones; thousands hundreds tens ones)

Use subtraction to check the addition above.

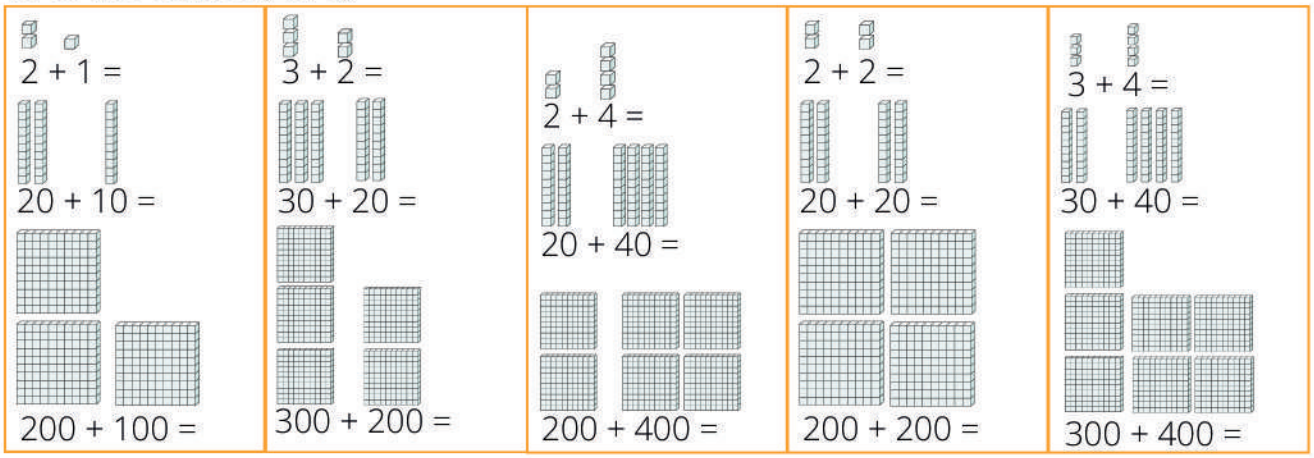
$$\begin{array}{r} 370 \\ -\ 153 \\ \hline 217 \end{array} \qquad \begin{array}{r} \square \\ -\ 345 \\ \hline \end{array} \qquad \begin{array}{r} \square \\ -\ 195 \\ \hline \end{array} \qquad \begin{array}{r} \square \\ -\ 585 \\ \hline \end{array} \qquad \begin{array}{r} \square \\ -\ 3585 \\ \hline \end{array}$$

(370 ← whole; 153 ← part; 217 ← part; □ ← whole)

Trace the existing numbers, fill in the missing numbers and color the squares with EVEN numbers yellow. (2.4)

						500		502	
	505								

Find the sums. (2.10)

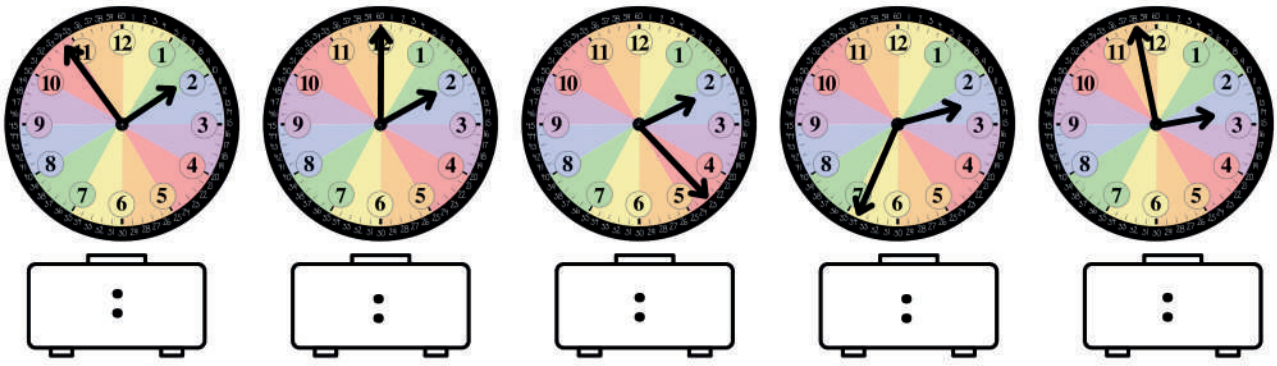


Find the sums. (2.10)

7 + 2 = _____	9 + 3 = _____	8 + 5 = _____
70 + 20 = _____	90 + 30 = _____	80 + 50 = _____
700 + 200 = _____	900 + 300 = _____	800 + 500 = _____
7000 + 2000 = _____	9000 + 3000 = _____	8000 + 5000 = _____

Complete these Multiplication Fact Family houses. (2.36)

What time is shown on these clocks? Write the time on the digital clock below. (2.9)



#5 Date _____

Find the DIFFERENCE without regrouping.

$$\begin{array}{r} 57 \\ -\ 12 \\ \hline \square \end{array}$$ ← whole, ← part, ← part

$$\begin{array}{r} 25 \\ -\ 11 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ -\ 20 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ -\ 16 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ -\ 10 \\ \hline \end{array}$$

Check each difference by adding the two PARTS. The SUM should be the WHOLE.

$$\begin{array}{r} 45 \\ +12 \\ \hline 57 \end{array}$$ ← part, ← part, ← whole

$$\begin{array}{r} \square \\ +11 \\ \hline \end{array}$$ ← part

$$\begin{array}{r} \square \\ +20 \\ \hline \end{array}$$ ← part

$$\begin{array}{r} \square \\ +16 \\ \hline \end{array}$$ ← part → $\square$

does this sum match the WHOLE above?

Find the differences with regrouping.

$$\begin{array}{r} 53 \\ -\ 24 \\ \hline 29 \end{array}$$ whole, tens | ones, ← part

$$\begin{array}{r} 71 \\ -\ 25 \\ \hline \end{array}$$ tens | ones

$$\begin{array}{r} 44 \\ -\ 19 \\ \hline \end{array}$$ tens | ones

$$\begin{array}{r} 40 \\ -\ 23 \\ \hline \end{array}$$ tens | ones

Check the DIFFERENCES by adding.

$$\begin{array}{r} 29 \\ +\ 24 \\ \hline 53 \end{array}$$ ← part, ← part, ← whole

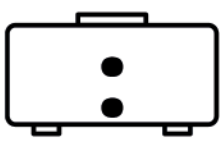
$$\begin{array}{r} \square \\ +25 \\ \hline \end{array}$$

$$\begin{array}{r} \square \\ +19 \\ \hline \end{array}$$

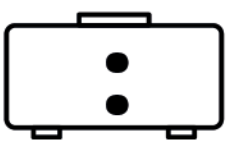
$$\begin{array}{r} \square \\ +23 \\ \hline \end{array}$$

Think of QUARTER BEFORE a time as moving the hands BACKWARD 15 minutes. (1.12) and (1.14) check Level 1 Lessons 12 and 14 if you need a review

Show two o'clock on both clocks.



Show **quarter before two** on these clocks.



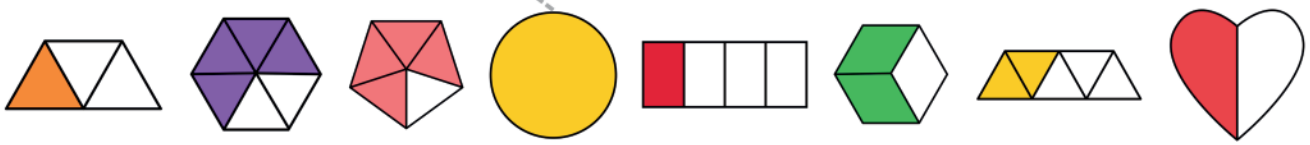
Trace the existing numbers, fill in the missing numbers and color the squares with EVEN numbers yellow. (2.4)

							100	101	
									112

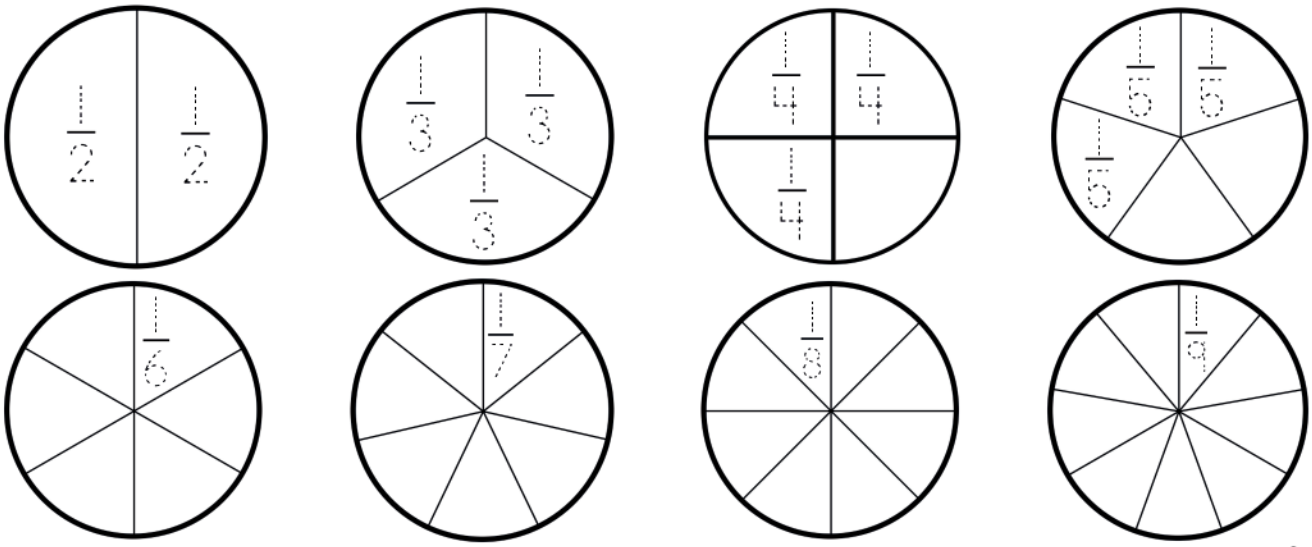
check Level 1 Lesson 48
if you need a review

Draw lines to match the fractions. (1.48)

$\frac{1}{4}$ 1 $\frac{1}{3}$ $\frac{2}{5}$ $\frac{4}{5}$ $\frac{4}{6}$ $\frac{2}{3}$ $\frac{1}{2}$



Label each piece of each circle with the correct fraction. Remember, the DENOMINATOR (the bottom of each fraction) is the NUMBER of pieces the shape is divided into and the top of each fraction will be one. (2.45)



#6 Date _____

Solve.

$(8 + 9) - (1 + 4) =$ _____

$3 - 4 \times 5 =$ _____

$3^2 - 5 =$ _____

$1 + 9 \times 4 =$ _____

$12 \div 2 + 3 \times 3 =$ _____

$6^2 \div 12 =$ _____

Order of Operations (PEMDAS):

1. **P**arentheses
2. **E**xponents
3. **M**ultiply & **D**ivide from left to right
4. **A**dd & **S**ubtract from left to right

$2(3 + 5) =$ _____

$1 - 2 \times 5 =$ _____

$15 \div (2 + 3) =$ _____

Write operators (x, ÷,+, -) in all of the empty squares to make each number sentence true. Remember to apply the Order of Operations, PEMDAS. (3.83)

7	×	2	-	4	=	10
2		1		3	=	5
2		4		3	=	5
=		=		=		=
12		6		4	=	10

9	-	3	×	2	=	3
4		2		7	=	1
3		4		6	=	2
=		=		=		=
12		2		3	=	6

Find the missing addends. (3.36)

$5 + \square = 7$

$\square - 5 = -7$

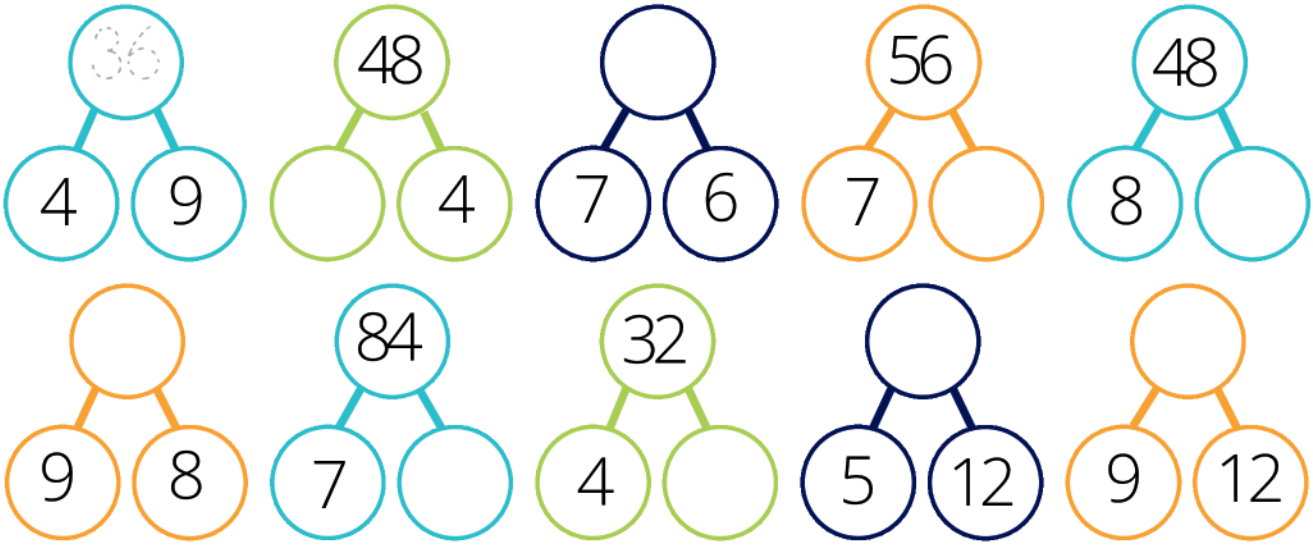
$\square - 5 = 7$

$3 - \square = -8$

$\square - 2 = 9$

$2 + \square = 13$

Find the missing member of each FACT FAMILY. (2.36)



Put these numbers in order from smallest to largest. (3.2)

175 517 715 157	____ smallest	____	____	____ largest	
98 890 89 980	____ smallest	____	____	____ largest	
102 120 118 201 210	____ smallest	____	____	____	____ largest
910 190 109 901	____ smallest	____	____	____ largest	

Fill in the blanks to make these number sentences true. (3.41)

$1^{2} = \_\_\_ \times \_\_\_ = \_\_\_$

$2^{2} = \_\_\_ \times \_\_\_ = \_\_\_$

$3^{2} = \_\_\_ \times \_\_\_ = \_\_\_$

$4^{2} = \_\_\_ \times \_\_\_ = \_\_\_$

$\_\_\_^{2} = \_\_\_ \times \_\_\_ = 25$

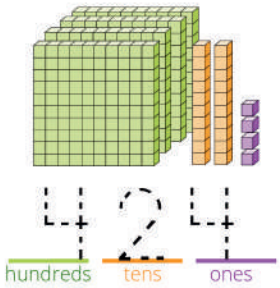
$\_\_\_^{2} = \_\_\_ \times \_\_\_ = 36$

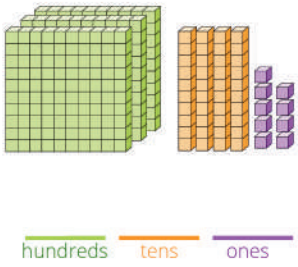
$\_\_\_^{2} = \_\_\_ \times \_\_\_ = 49$

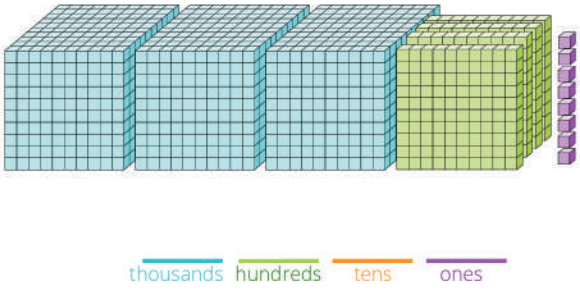
$\_\_\_^{2} = \_\_\_ \times \_\_\_ = 64$

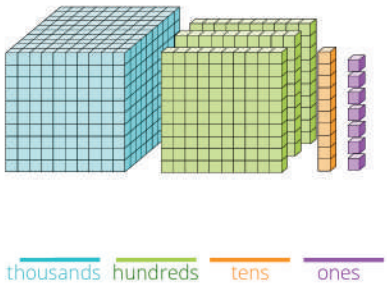
#7 Date _____

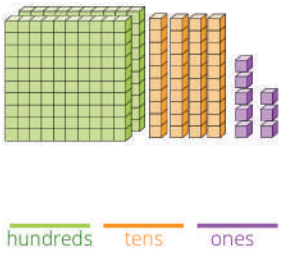
What numbers do these base ten blocks represent? Read each number aloud.

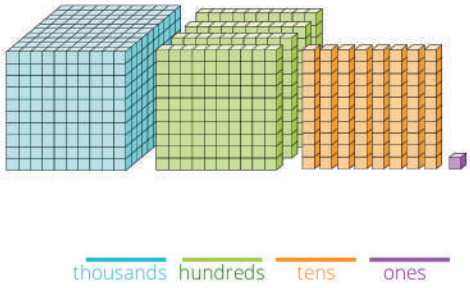






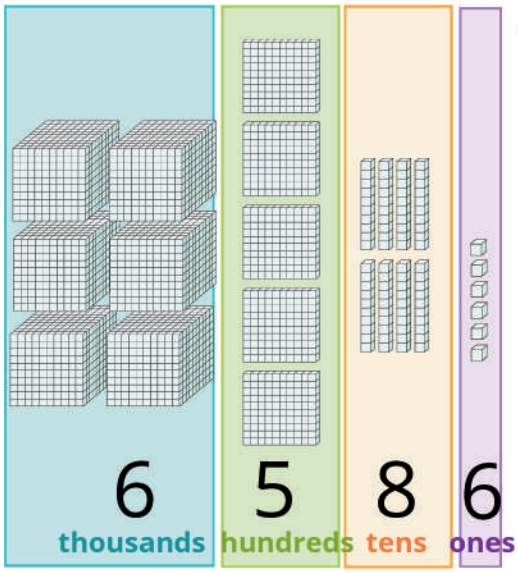






Draw two parallel lines. Then draw a line that makes right angles when it crosses both lines. (3.48)

Draw two oblique lines that cross. Label all 4 angles you made acute or obtuse.



All about the number 6,586:

1. How many ones are in this number? _____
2. How many hundreds are in this number? _____
3. How many thousands are in this number? _____
4. How many tens are in this number? _____
5. Which number is in the hundreds place? _____
6. Which number is in the thousands place? _____
7. Which number is in the ones place? _____

6000 + 500 + 80 + 6

Write the name of this number in words: _____

Solve using the Order of Operations (PEMDAS). (3.83)

$4 \div 2(8 - 6) =$ ____

$3^2 - \sqrt{81} =$ ____

$8(5 + 4) \div 12 =$ ____

$2(5 \times 3) \div 6 =$ ____

$8^2 - 6 \times \sqrt{49} =$ ____

$4^2 - \sqrt{36} =$ ____

$2 + 12 \div 3 =$ ____

$8(5 - 1) \div 2 =$ ____

$3 - 3 \times 4 =$ ____

$(2^3 + 4) \div 2 =$ ____

Use the number line to find each sum or difference. (3.58)

10 - 12 = ____

12 - 10 = ____

-12 - 10 = ____

-12 + 10 = ____

-3 + 11 = ____

9 - 7 = ____

14 - 15 = ____

-18 + 6 = ____

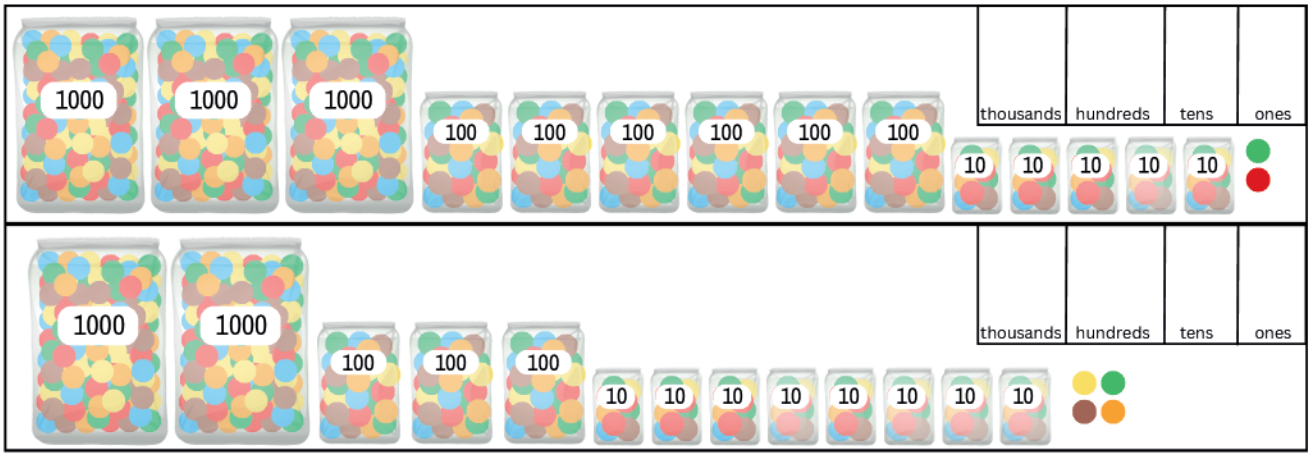
2 - 15 = ____

15 - 2 = ____

-2 - 15 = ____

-2 + 15 = ____

How many chocolate candies? Read each number aloud. (2.7)

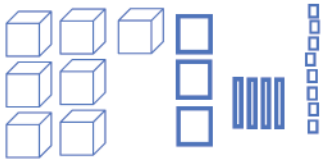


(3.13) Your mom cut an orange in half. The she cut each half in half. You ate three of the orange pieces. What fraction did you eat?

What fraction is left?

#8 Date _____

Complete each chart. Draw base ten blocks using a cube to represent each thousand, a large square to represent each hundred, a long, skinny rectangle to represent each ten and and a small square to represent each one.

Standard Form	Word Form
7,348	Seven thousand, three hundred forty-eight
Expanded Form	**Base Ten Form**
7,000 + 300 + 40 + 8	

Standard Form	Word Form
4,109	
Expanded Form	**Base Ten Form**

Use your place value chart to fill in the blanks in this table.

Word Form	Expanded Form	Standard Form
Twenty-two thousand, one hundred fifty-seven	20,000+2,000+100+50+7	22,157
Fifty thousand, nine hundred one		50,901
	1,000,000 + 40,000 + 5	1,040,005
Twelve thousand eleven		12,011
Fifty-nine thousand	50,000 + 9,000	
Three million, nine hundred		
	20,000,000 + 5,000,000 + 20,000 + 5,000	
	10,000,000 + 4,000,000 + 100,000 + 10,000 + 9,000 + 60 + 5	
One hundred three million		
		9,900,000

Use the tables below to answer the questions. (3.24)

State	Area
Connecticut	5,543
Delaware	2,489
New Jersey	8,721
New Hampshire	9,349
Rhode Island	1,545

Which of these states has the largest area? _____

Which of these states has the smallest area? _____

Order these states from largest to smallest: _____

_____

_____

Which of these states has the largest area? _____

Which of these states has the smallest area? _____

Order these states from largest to smallest: _____

_____

_____

State	Area
California	163,696
Texas	268,580
Montana	147,042
Alaska	663,267
New Mexico	121,589

Solve using the Order of Operations (PEMDAS). (3.83)

$7(5 + 4) - 3 =$ _____

$9 + 18 \div 3 =$ _____

$15 - 20 \div 2 =$ _____

$2 + 8^2 - 4^2 =$ _____

$12 \times 3 - 2 \times 3 =$ _____

$5 - 2(3 + 2) =$ _____

$5^2 - 3(8 - 1) =$ _____

$30 \div 6 \times 5 =$ _____

$5 - 15 \div 3 =$ _____

$15 - (7 + 5) =$ _____

$6 + 2 \times 3 =$ _____

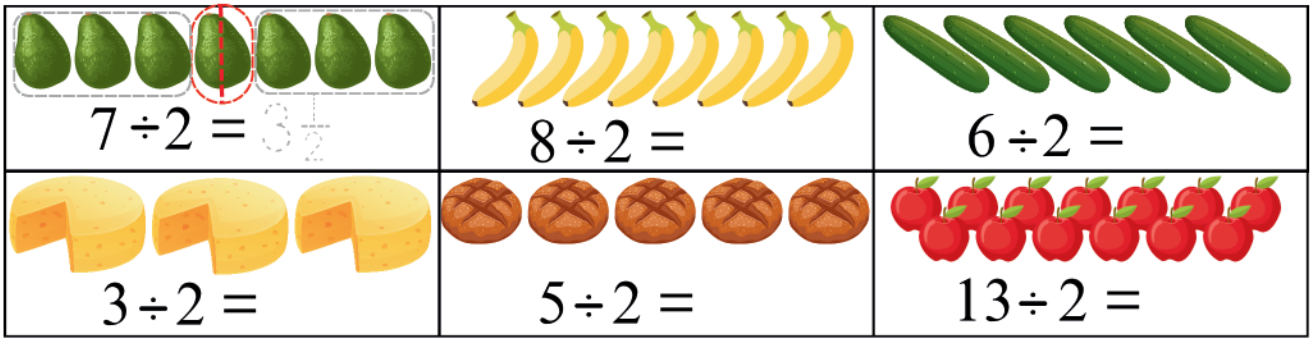
$6 \div (2 \times 3) =$ _____

Trace the existing numbers, fill in the missing numbers and color the squares with EVEN numbers yellow. (2.6)

	995					1000			

#9 Date _____

Draw lines to divide each set into equal halves. If there is a leftover, circle it in red, then use a vertical line to cut it in half.



Do you see a pattern? Look at the boxes above with an EVEN dividend. Now look at the boxes with an ODD dividend. What's the pattern?

_____

Write operators (x, ÷,+, -) in all of the empty squares to make each number sentence true. Remember to apply the Order of Operations, PEMDAS. (3.83)

6	-	3	x	2	=	0
5		1		2	=	4
10		2		3	=	2
=		=		=		=
3		2		3	=	2

8		4		1	=	2
2		2		2	=	8
3		3		1	=	2
=		=		=		=
2		5		4	=	6

5		0		6	=	6
5		7		10	=	2
5		4		2	=	3
=		=		=		=
5		4		8	=	9

WORD PROBLEMS

What is three squared plus five?

The square root of 81 is how much less than five squared?

Standard Form	Word Form
1,002	
Expanded Form	**Base Ten Form**

Standard Form	Word Form
5,680	
Expanded Form	**Base Ten Form**

Let's skip count using place value. (3.34)

Skip count by 2.

112 114 116 118 ____ ____ ____ ____ ____ ____

Skip count by 20. (2 in the tens place)

112 132 152 172 192 212 ____ ____ ____ ____

Skip count by 200. (2 in the hundreds place)

112 312 512 ____ ____ 1,112 1,312 ____ ____ ____

Skip count by 2000. (2 in the thousands place)

112 2112 4112 ____ ____ 10,112 _____ _____ _____

The three longest rivers in the world are the Yangtze, the Amazon, and the Nile. The Yangtze is 6,300 kilometers long. The Amazon is 6,992 kilometers long. The Nile is 6,853 kilometers long. Order these rivers from longest to shortest. (3.24)

Solve using the Order of Operations (PEMDAS). (3.83)

8 - 2(1 + 3) = _____

8 - 2 x 1 + 3 = _____

(8 - 2) x (1 + 3) = _____

4 - 12 ÷ 6 = _____

12 ÷ 3 x 5 - 5 = _____

7 + 15 ÷ 3 = _____

(2 + 4) x (6 - 3) = _____

2 + 4 x 6 - 3 = _____

2 x 4 - 6 x 3 = _____

2^2 - (3 + 5) = _____

3^2 - 2 x 8 = _____

4(5 + 3)= _____

#10 Date _____

Trace then write each term, then draw a line to match each term to its definition.

factor

prime number

composite number

operators

place value

- Any symbol that indicates an operation to be performed.
- Any positive number with more than two factors.
- A number that divides the given number evenly or exactly, leaving no remainder.
- The position of each digit in a number determines its value.
- This can only be divided by itself and one.

List the factors of each number from the least to the greatest. Circle each prime number.

18: ____, ____, ____, ____, ____, ____

11: ____, ____

5: ____, ____

4: ____, ____, ____

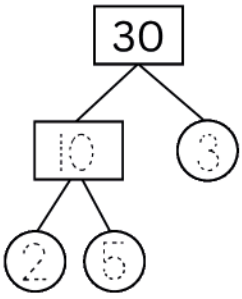
20: ____, ____, ____, ____, ____, ____

9: ____, ____, ____

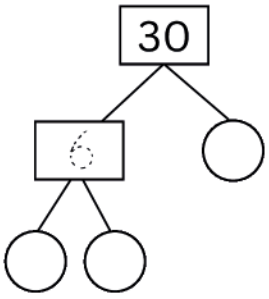
10: ____, ____, ____, ____

6: ____, ____, ____, ____

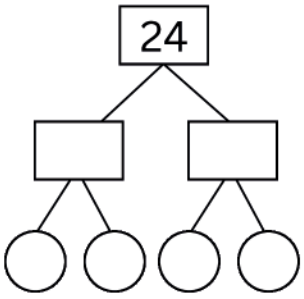
Factor the number in the top box of each factor tree. The composite numbers go in the rectangles and the prime numbers go in the circles. (3.65)



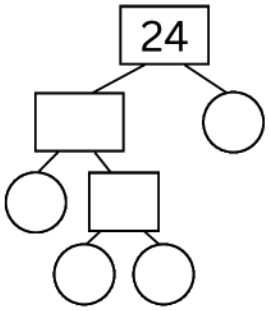
prime factorization: 2 x 5 x 3



prime factorization: _____



prime factorization: _____



prime factorization: _____

The digit in the ones' place is 8. The digit in the tens' place is two fewer than the digit in the ones' place. The digit in the hundreds place is half the digit in the ones place.

hundreds tens ones

The digit in the tens place is 6. The digit in the ones place is half of the digit in the tens place. The number is between 200 and 300.

hundreds tens ones

Find the missing factors. (3.36)

☐ x 5 = 35	7 x ☐ = 63	☐ x 8 = 72
4 x ☐ = 32	☐ x 3 = 36	4 x ☐ = 36
☐ x 6 = 48	8 x ☐ = 40	☐ x 7 = 56

What fraction of the number sentences above have an ODD product?

What fraction of the number sentences above have an EVEN product?

Person	Steps
Mom	21,543
Dad	22,489
You	28,721
Sister	29,349
Brother	11,465

Your family spent the day at an amusement park. (3.25)

Who took the most steps? _____

Who took the fewest steps? _____

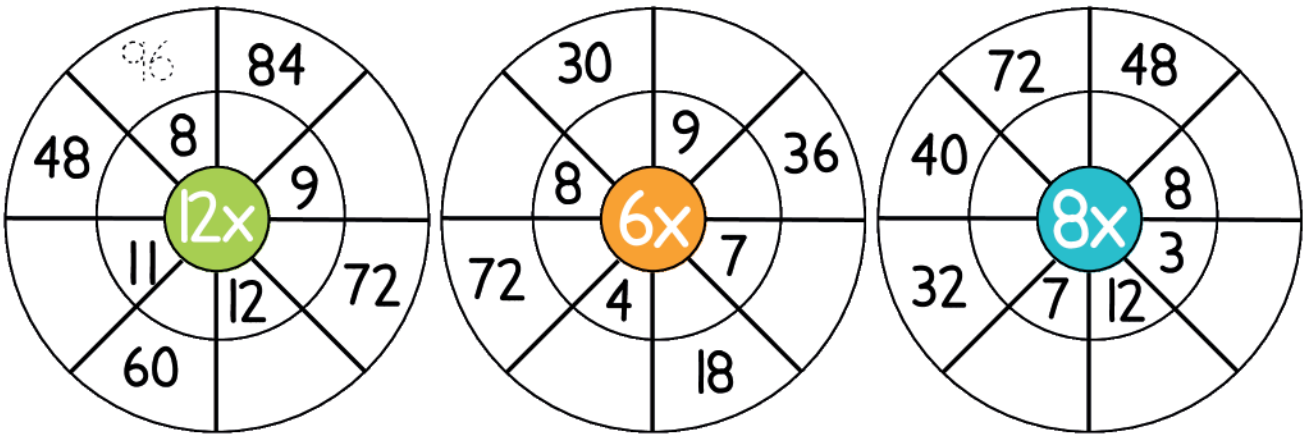
Order your family members from most steps taken to fewest steps taken: _____

_____

How many more steps did you take than your brother? _____

How many more steps did your sister take than you? _____

Fill in the blanks of these multiplication circles so that the outer circle is the PRODUCT of the middle circle and the innermost circle. (2.36)



#11 Date _____

Rounding Steps:

1. Circle the digit in the place to which you are rounding.
2. Look at the digit in the next place to the right. If it's 4 or less let your circled digit rest. If it's 5 or more, let your circled digit soar one number higher.
3. Make all digits to the right of the circled digit zeros.

Round to the nearest TEN:

35 40
Five or more? Let the 5 soar – round UP to 40.

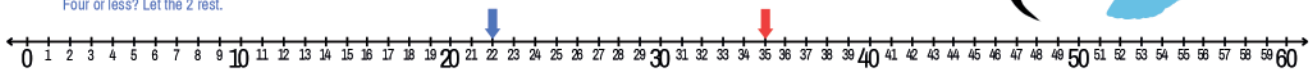
74 _____

29 _____

22 20
Four or less? Let the 2 rest.

75 _____

31 _____



Round to the nearest HUNDRED:

345 300
Four or less? Let the 3 rest.

119 _____

275 _____

101_____

354 400
Four or less? Let the 1 rest.

191 _____

205 _____

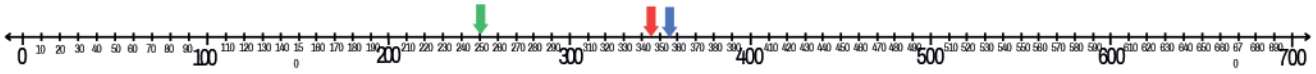
149_____

250 300
Five or more? Let the 2 soar (round UP to 3).

150 _____

257 _____

703_____



Round to the nearest THOUSAND:

1499 1000
Four or less? Let the 1 rest.

1386 _____

2756 _____

1433_____

3050 3000
Four or less? Let the 3 rest.

2014 _____

2810 _____

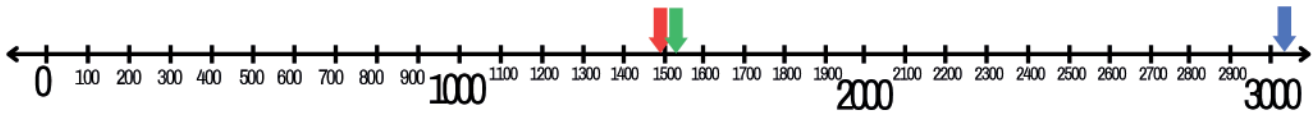
1649_____

1521 2000
Five or more? Let the 1 soar (round UP).

1101 _____

1254 _____

2128_____



1 5 5 1
thousands hundreds tens ones

2 1 0 3
thousands hundreds tens ones

Round to the nearest TEN _____

Round to the nearest HUNDRED _____

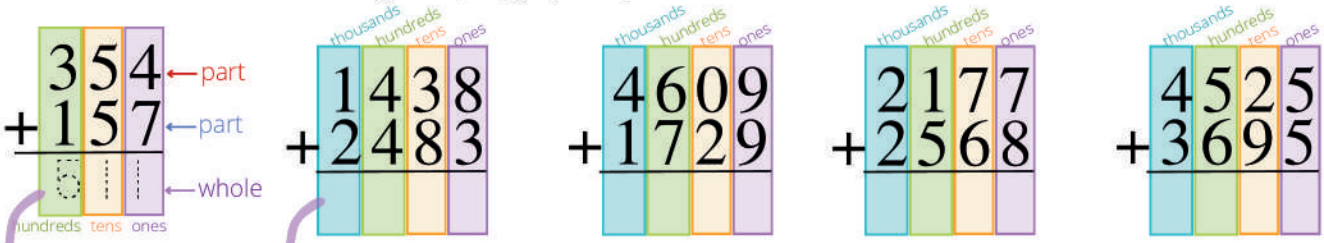
Round to the nearest THOUSAND _____

Round to the nearest TEN _____

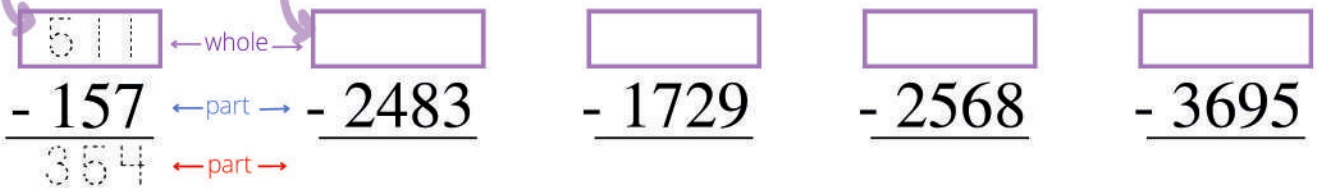
Round to the nearest HUNDRED _____

Round to the nearest THOUSAND _____

Find the sums with regrouping. (2.12)



Use subtraction to check the addition above.



Change each addition number sentence to a multiplication number sentence. (2.20)

8 + 8 + 8 + 8 + 8 + 8 = 48

12 + 12 + 12 + 12 = 48

9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 = 72

WORD PROBLEMS

quantity means parentheses (5 + 2)

What is three times the quantity of five plus two?

Three squared is how much more than the square root of 49?

City	Population
Chicago	2,746,388
Los Angeles	3,898,747
Phoenix	1,644,409
New York City	8,804,190
Houston	2,304,580

These are the five cities in the United States with the largest populations. (3.25)

Which city has the largest population? _____

Which city has the smallest population? _____

Order these cities from the smallest population to the largest: _____

_____

How many more people does Houston have than Phoenix? _____

#12 Date _____

Multiplication Algorithm for 1-digit Multipliers:

1. Stack the numbers with the smaller number (the multiplier) on the bottom, lining up digits by place value.
2. Multiply the multiplier by the number in the ones place of the top number, writing the answer under the line. If the product of these two numbers is greater than nine, move the TEN over to the TENS PLACE.
3. Multiply the multiplier by EACH DIGIT in the top number until complete. Regroup where necessary.

5 x 8 = 40
Store the 4 TENS in the tens column.

3 x 8 = 24
Add the 4 TENS.
24 + 4 = 28

Find the products.

70 x 2 =
4 x 2 = _____
add products

74
x 2

15
x 5

57
x 3

43
x 6

38
x 8

26
x 4

253 x 4 =
200 x 4 =
50 x 4 =
3 x 4 = _____
add products

253
x 4

325
x 2

452
x 5

127
x 3

804
x 2

362
x 8

340
x 6

267
x 4

512
x 7

5132 x 4 =
5000 x 4 =
100 x 4 =
30 x 4 =
2 x 4 = _____
add products

5132
x 4

2635
x 2

1738
x 4

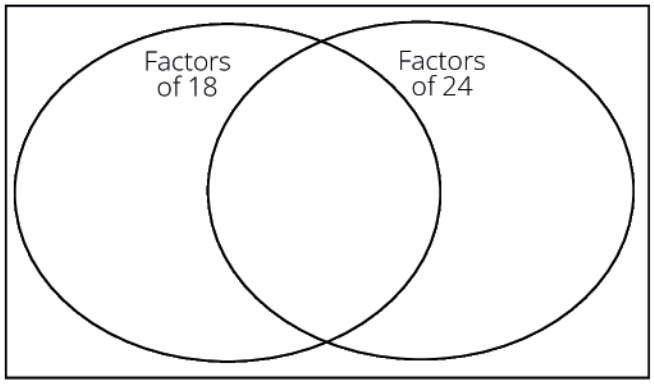
5016
x 3

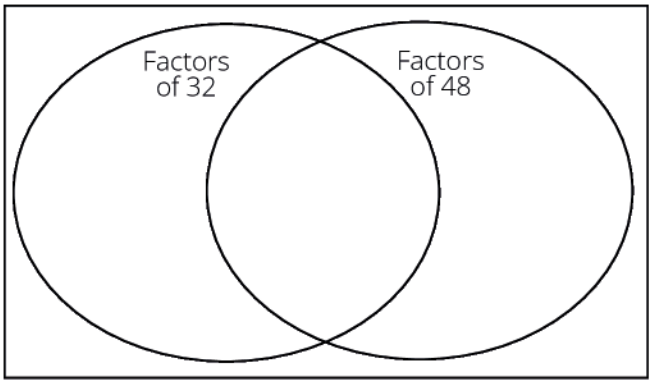
8379
x 4

3810
x 3

1031
x 5

Complete these Venn Diagrams. (3.30)





Order these numbers from smallest to largest. (3.2)

8,674	8,476	8,467	8,647
_____ smallest	_____	_____	_____ largest
1,029	1,092	1,290	1,920
_____ smallest	_____	_____	_____ largest
3,051	3,501	3,015	3,105
_____ smallest	_____	_____	_____ largest

Compare these numbers (<, >, =)

1,375	1,357
8,243	8,245
3,417	3,714
79,010	79,001
17,397	17,391
25,111	21,111

Write the word form. (4.8)

12,573 _____

93,437 _____

18,001 _____

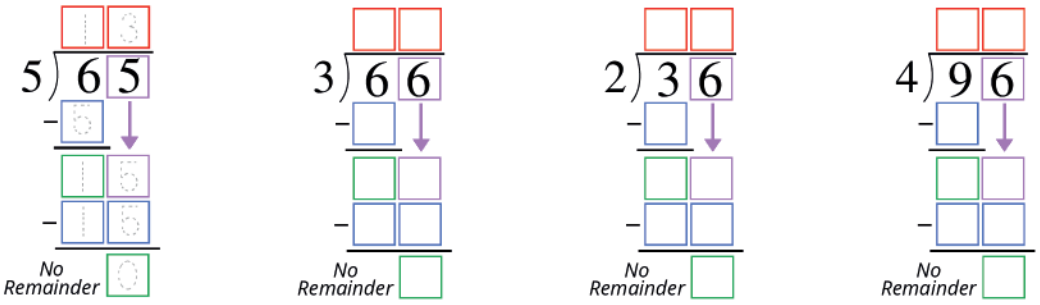
Write the standard form. (4.8)

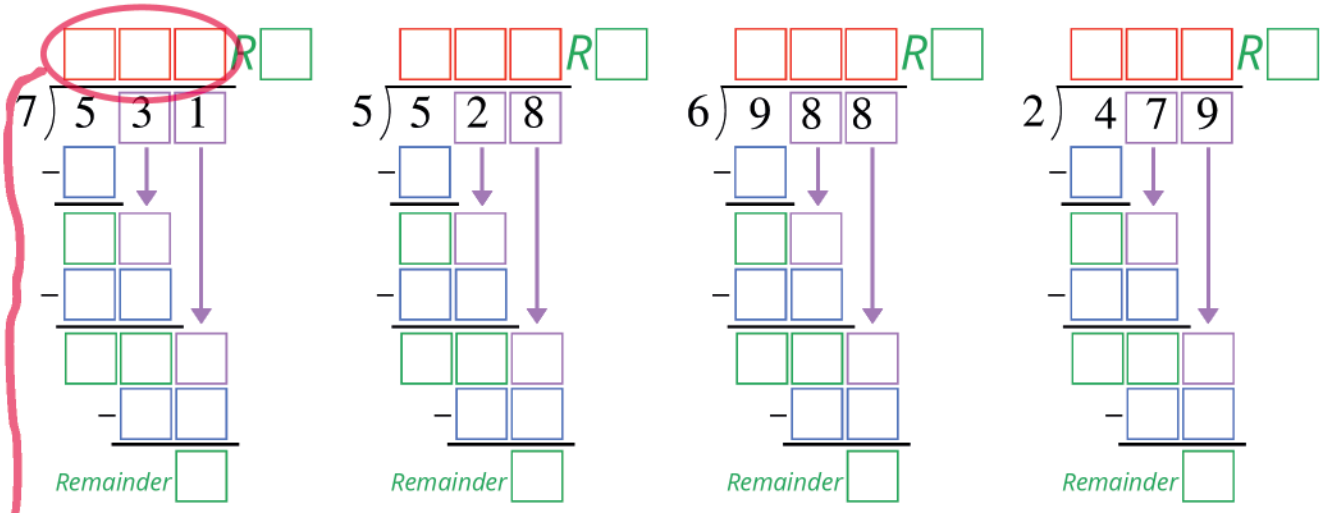
Fifteen million, four hundred thirty-nine thousand, eleven _____

One hundred seventy-eight thousand, thirty-five _____

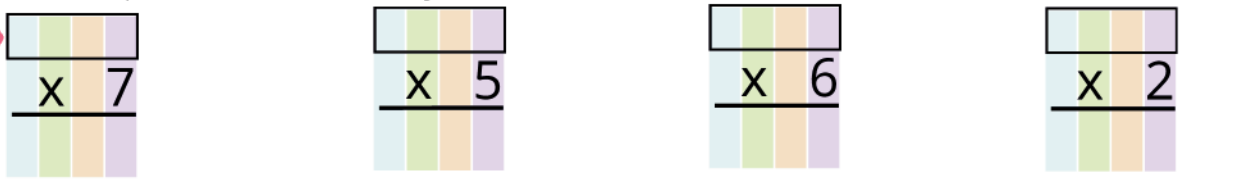
#13 Date _____

Divide.
Multiply.
Subtract.
Bring Down.
Repeat.

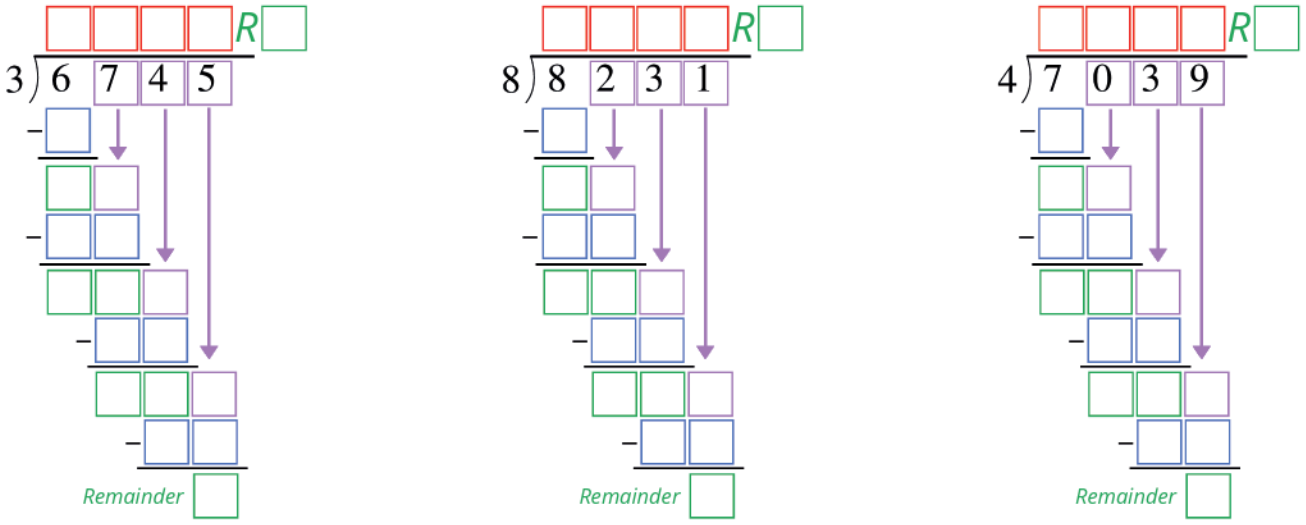




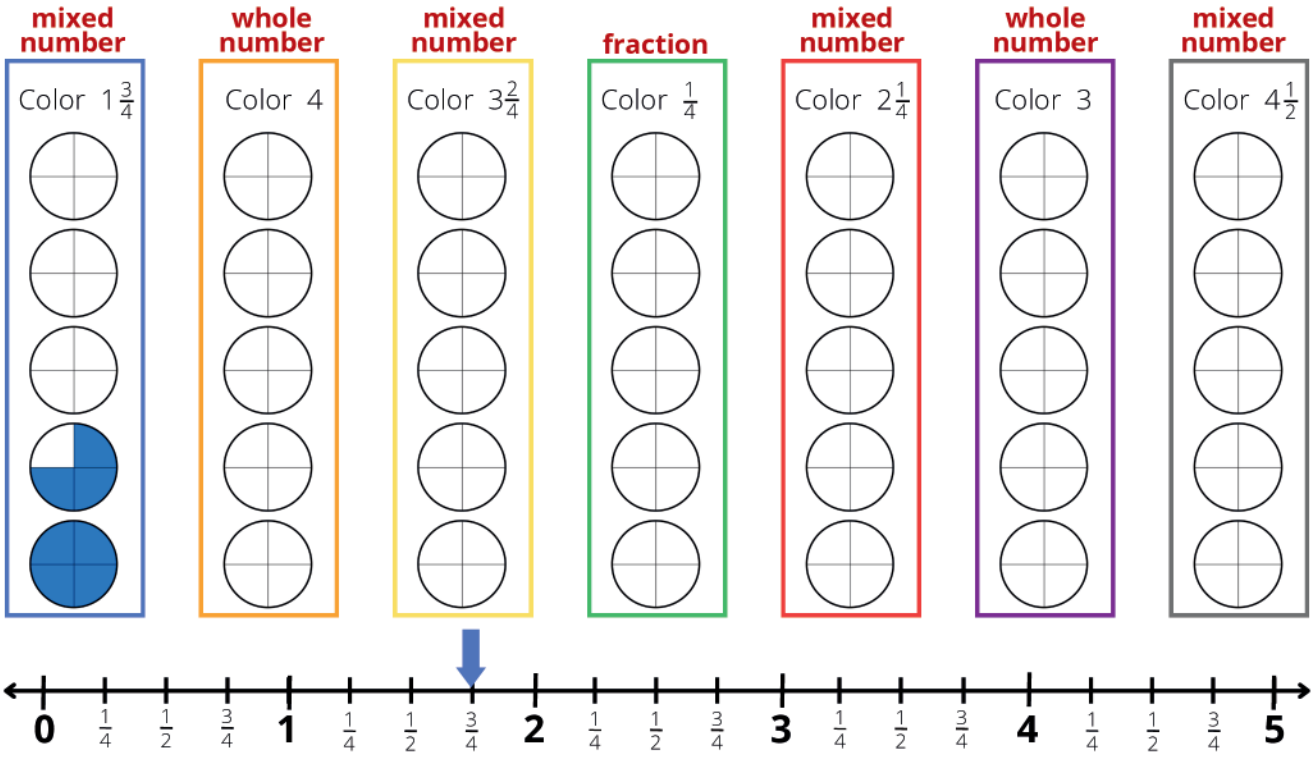
Use multiplication to check your division.



add the remainder _____ add the remainder _____ add the remainder _____ add the remainder _____



Color the number in each colored rectangle. Then draw an arrow that color pointing to the number on the number line below. (3.16)

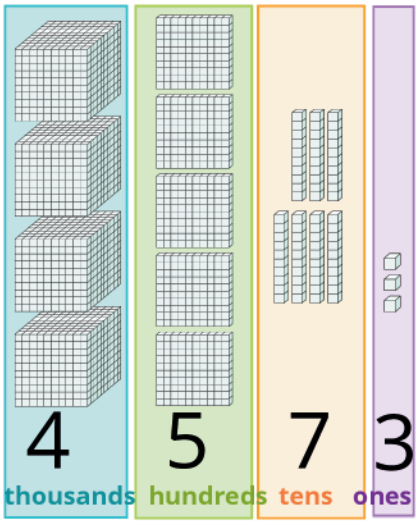


From the problem above:

List the mixed numbers _____

List the fractions _____

List the whole numbers _____



All about the number 4,573. (4.7)

1. What is the value of the 3? _____
2. What is the value of the 5? _____
3. What is the value of the 7? _____
4. What is the value of the 4? _____
5. Add ten. What is the sum? _____
6. Add three hundred. What is the sum? _____
7. Add one thousand. What is the sum? _____

4000 + 500 + 70 + 3

Write this number in words form: _____

#14 Date _____

Read these word problems carefully and underline the question being asked before you begin.

Each foot of wall contains 8 bricks. How many feet of wall can you build if you have 144 bricks?

The publisher placed 100 books into boxes that held 6 books each. How many boxes were **completely filled**?

How many books were **left over**?

How many boxes were needed to hold **all of the books**?

38 kids from your homeschool group are taking a field trip to the zoo. Each car can hold 7 passengers in addition to the driver. How many moms will need to drive?

When you buy milk directly from the farm, it arrives in quart-sized glass jars packed into boxes that hold 4 jars each. If you order 6 gallons each week, how many boxes will you get?

Each bottle holds 240 vitamins. If you give each of your five kids 1 vitamin per day, how many days will the bottle last?

If you start the bottle January 5, what date will the bottle be empty?

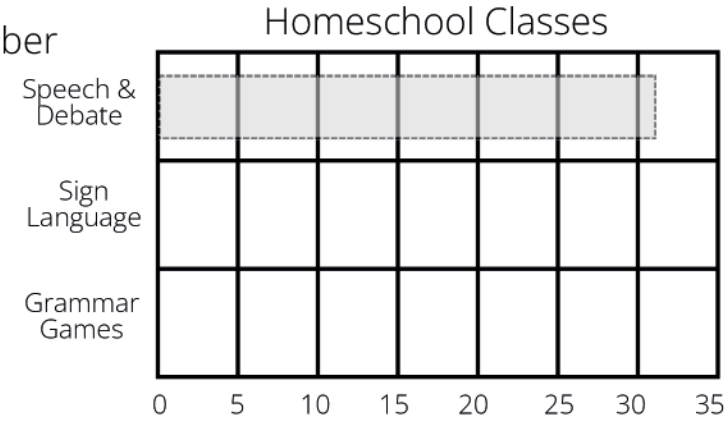
You want to make cakes for a bake sale. You have a big box with 5 dozen eggs. Each cake calls for 6 eggs. How many cakes can you make?

Draw a bar graph to show the number of children in each class. (3.27)

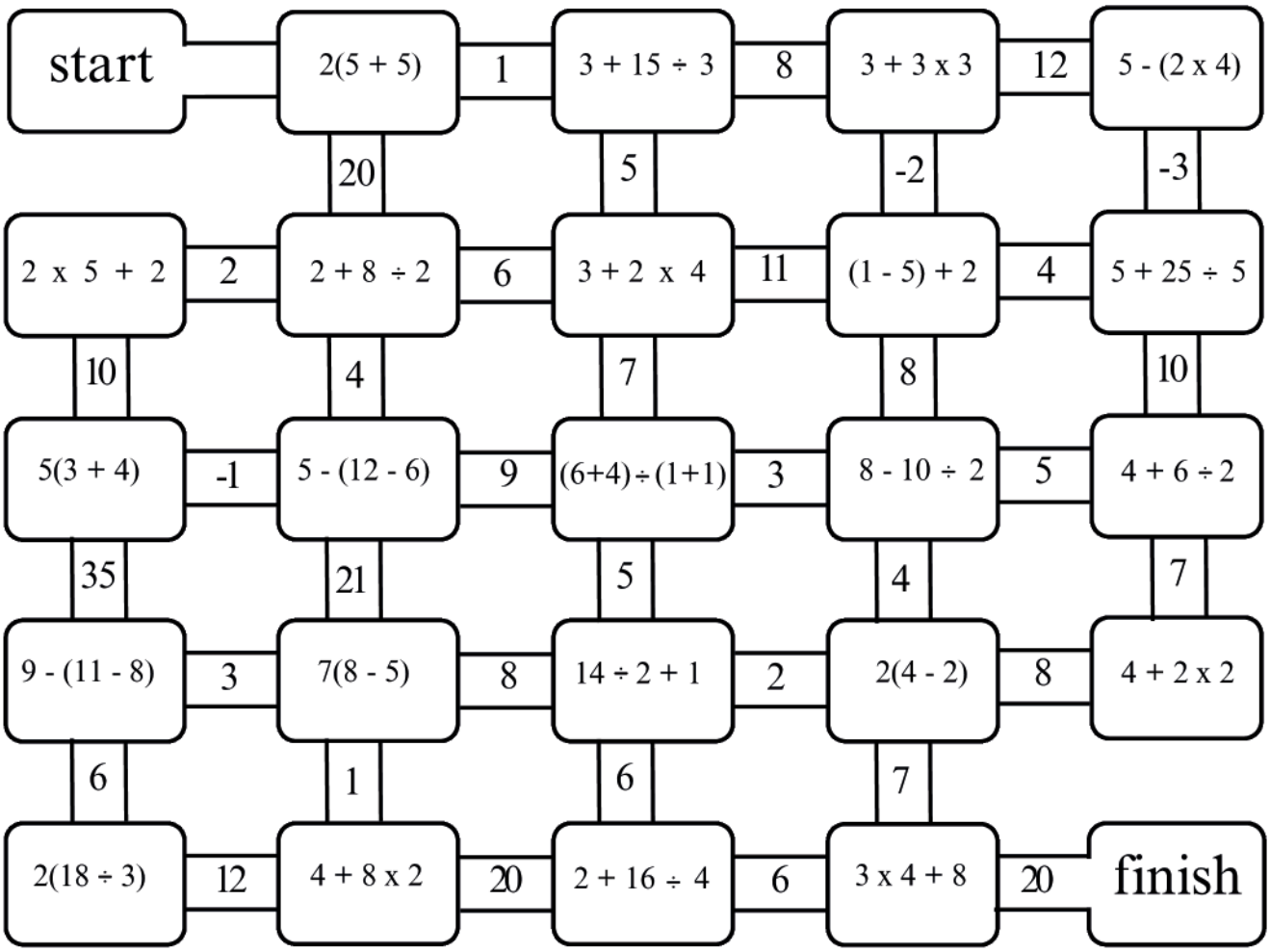
Speech & Debate: 31 children

Sign Language: 27 children

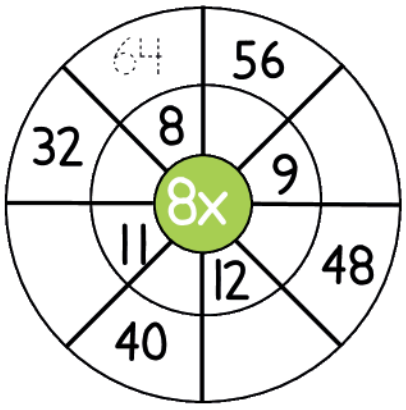
Grammar Games: 21 children

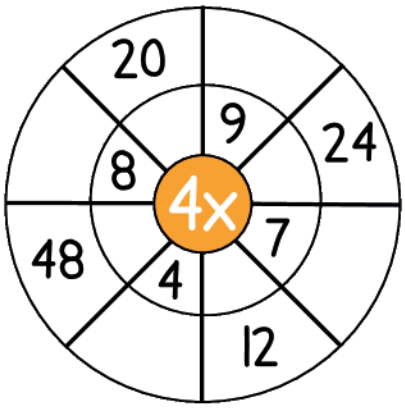


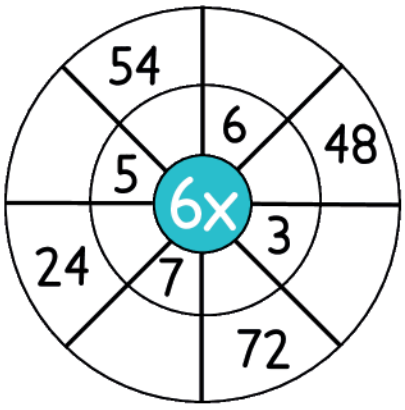
Choose the correct answer to each problem to find your way through this maze. (3.83)



Fill in the blanks of these multiplication circles so that the outer circle is the PRODUCT of the middle circle and the innermost circle. (2.36)





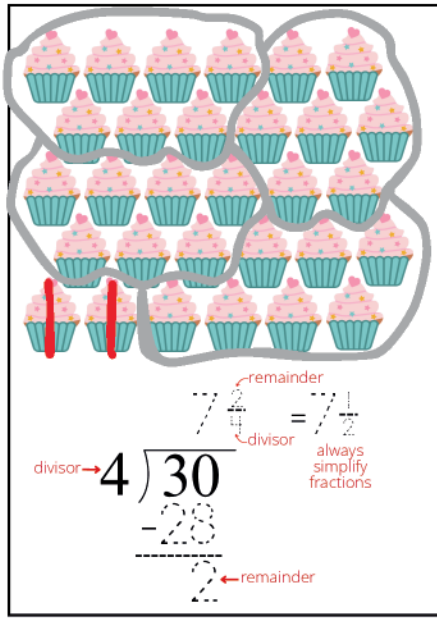


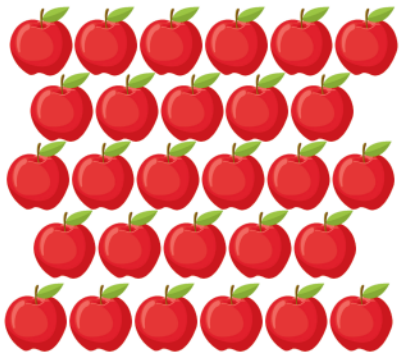
Continue the pattern (think square roots):

144, 121, 100, _____, _____, _____, _____, _____, _____, _____, _____, _____

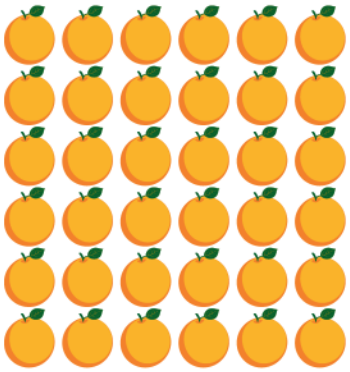
#15 Date _____

Draw lines to divide each set into the number of groups specified by the divisor. Circle any REMAINDERS in red, then divide them into the number of groups specified by the divisor. Divide the remainder PIECES equally between the groups.





$3\overline{)28}$



$5\overline{)36}$

Draw circles to group the items, then complete the equations.

$\frac{18}{3} =$ $18 \div 3 =$ $3\overline{)18}$

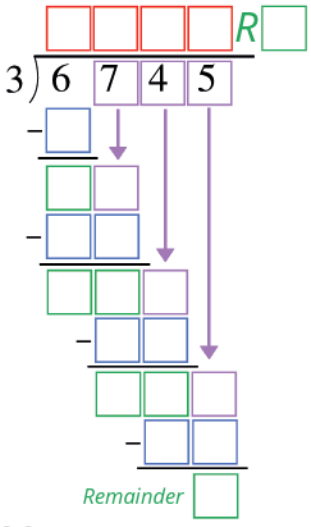
What is 1/3 of 18?
What is 2/3 of 18?

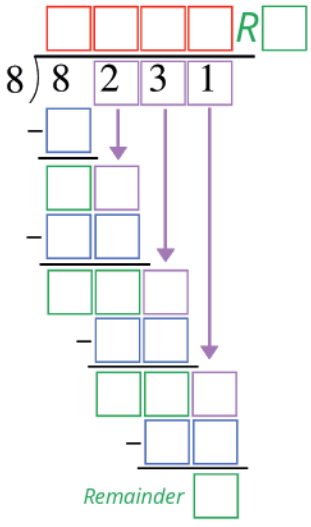
$\frac{18}{6} =$ $18 \div 6 =$ $6\overline{)18}$

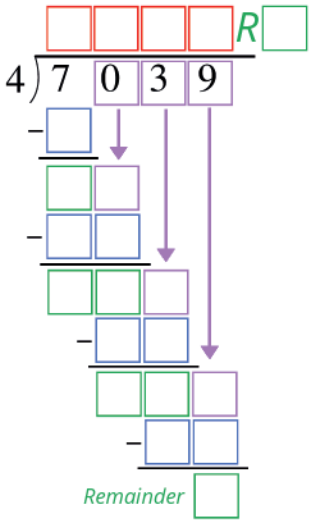
What is 1/6 of 18?
What is 2/6 of 18?

$\frac{18}{2} =$ $18 \div 2 =$ $2\overline{)18}$

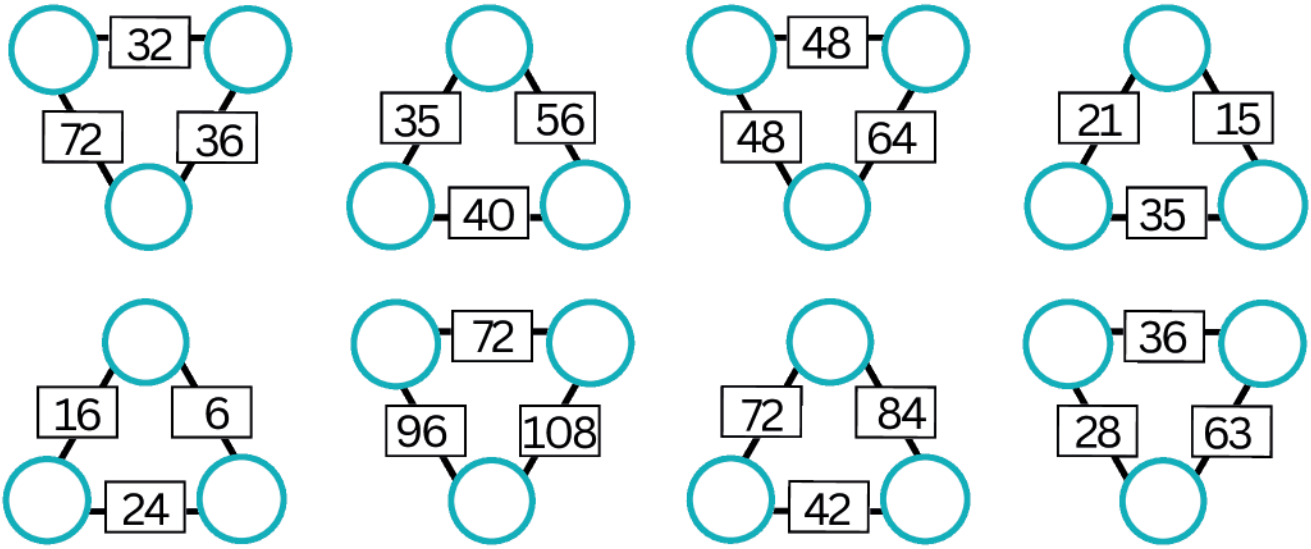
What is 1/2 of 18?







The numbers in the rectangles are the PRODUCTS of the FACTORS in the circles. Find the missing factors.



How much money is this? (3.18)

$\$\underline{5}.\underline{75}$
dollars cents

$\$\_\_.\_\_$
dollars cents

$\$\_\_.\_\_$
dollars cents

$\$\_\_.\_\_$
dollars cents

$\$\_\_.\_\_$
dollars cents

Round each amount above to the nearest dollar.

$\$\underline{6}$
dollars

$\$\_\_\_\_$
dollars

$\$\_\_\_\_$
dollars

$\$\_\_\_\_$
dollars

$\$\_\_\_\_$
dollars

Solve using the Order of Operations (PEMDAS). (3.83)

$7(1 + 3) \div 2^2 =$ _____

$(1 + 4) \times (2 + 3) =$ _____

$1 + 4 \times 2 + 3 =$ _____

$3(4^2 - 8 \times 2) =$ _____

$12 \times 4 - 2 \times 4 =$ _____

$12 \times (4 - 2) \times 4 =$ _____

$5^2 - 5 \times 5 =$ _____

$6^2 - 4^2 =$ _____

$4 + 7 - 3 \times 2 =$ _____

$15 - (7 - 2) =$ _____

$1 + 3 \times 3 =$ _____

$10 \div (5 \times 2) =$ _____

#16 Date _____

Trace then write each term, then draw a line to match each term to its definition.

numerator

denominator

fraction

congruent

quotient

- The answer to a division problem.
- A piece of something.
- The bottom number in a fraction, it tells you how many pieces the shape is divided into.
- Two items are the same size and shape.
- The top number in a fraction, it tells you how many pieces you have.

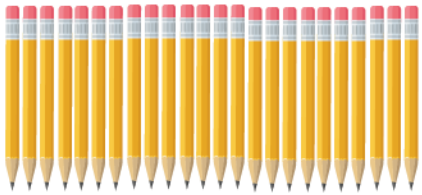
Divide the cubes into SIX equal groups.

What is 1/6 of 12?
What is 2/6 of 12?
What is 3/6 of 12?
What is 4/6 of 12?
What is 5/6 of 12?
What is 6/6 of 12?

Divide the marbles into SIX equal groups.

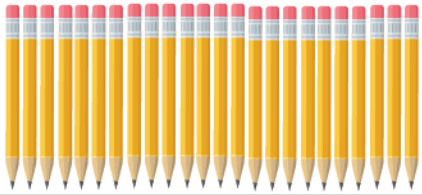
What is 1/6 of 18?
What is 2/6 of 18?
What is 3/6 of 18?
What is 4/6 of 18?
What is 5/6 of 18?
What is 6/6 of 18?

Divide the pencils into SIX equal groups.



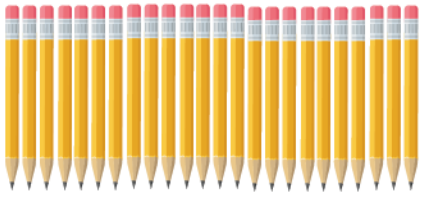
What is 1/6 of 24?
What is 2/6 of 24?
What is 3/6 of 24?
What is 4/6 of 24?
What is 5/6 of 24?
What is 6/6 of 24?

Divide the pencils into FOUR equal groups.



What is 1/4 of 24?
What is 2/4 of 24?
What is 3/4 of 24?
What is 4/4 of 24?

Divide the pencils into EIGHT equal groups.



What is 1/8 of 24?
What is 2/8 of 24?
What is 3/8 of 24?
What is 4/8 of 24?
What is 5/8 of 24?
What is 6/8 of 24?
What is 7/8 of 24?
What is 8/8 of 24?

What patterns do you see in these problems?

Solve using the Order of Operations (PEMDAS). (3.83)

$8(4 - 1) \div 2 =$ _____

$(5 - 2)^2 \times (1 + 2) =$ _____

$10 - 4 \times 2 =$ _____

$6^2 \div 3(4 - 2) =$ _____

$4^2 - \sqrt{64} =$ _____

$7(5 + 3) \div 2 =$ _____

$10^2 + \sqrt{36} =$ _____

$3 + 12 \div 2 =$ _____

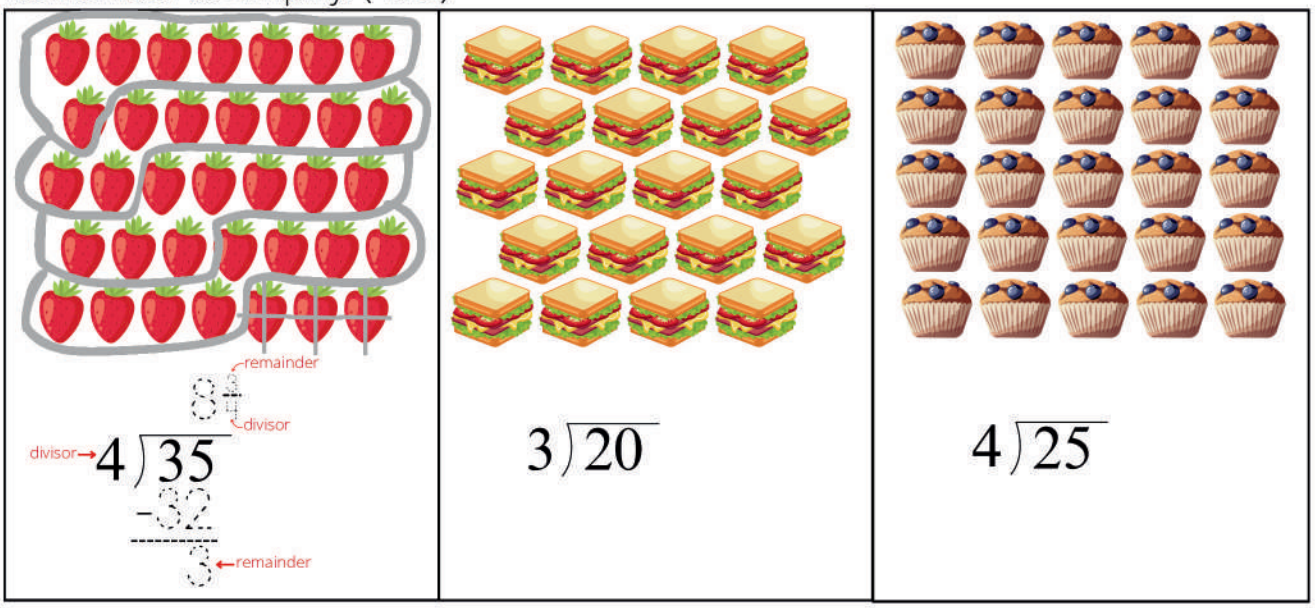
$8(10 \div 2) \div 2 =$ _____

$10 - (5 - 2) =$ _____

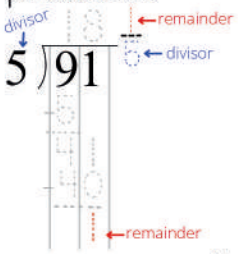
$10 - 5 - 2 =$ _____

$10 \div 2 - 5 =$ _____

Draw lines to divide each set into the number of groups specified by the divisor. Circle any REMAINDERS in red, then divide them into the number of groups specified by the divisor. Divide the remainder PIECES equally between the groups. Remember to simplify. (4.15)



Find the quotients. Divide any remainders by the divisor to complete each problem.



2) 25

8) 89

6) 97

7) 65

What is $\frac{1}{2}$ of 30? ↙ x (times)

What is $\frac{1}{5}$ of 30?

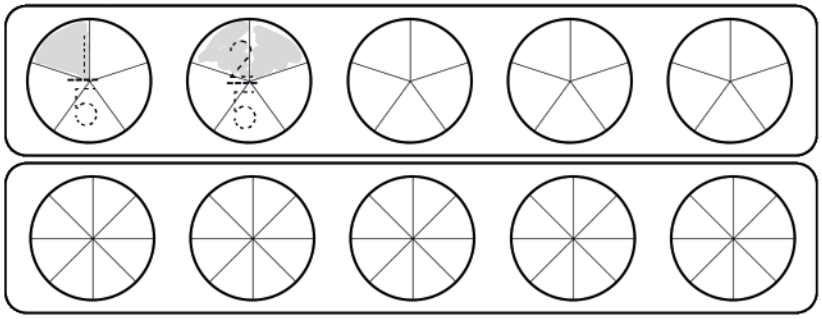
What is $\frac{1}{3}$ of 30?

#17 Date _____

Order these fractions from least to greatest, then color them and label them.
(All denominators are the same!)

$\frac{4}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{5}{5}$ $\frac{1}{5}$

$\frac{3}{8}$ $\frac{4}{8}$ $\frac{6}{8}$ $\frac{2}{8}$ $\frac{7}{8}$



Order these fractions from least to greatest, then draw them.
(All of the numerators are one!)

$\frac{1}{2}$ $\frac{1}{1}$ $\frac{1}{4}$ $\frac{1}{5}$ $\frac{1}{3}$

$\frac{1}{9}$ $\frac{1}{7}$ $\frac{1}{6}$ $\frac{1}{8}$ $\frac{1}{10}$

Compare these fractions (<, >, =). (All numerators are one!)

$\frac{1}{5} \bigcirc \frac{1}{6}$ $\frac{1}{4} \bigcirc \frac{1}{6}$ $\frac{1}{3} \bigcirc \frac{1}{2}$ $\frac{1}{5} \bigcirc \frac{1}{8}$

$\frac{1}{2} \bigcirc \frac{1}{4}$ $\frac{1}{8} \bigcirc \frac{1}{8}$ $\frac{1}{2} \bigcirc \frac{1}{12}$ $\frac{1}{6} \bigcirc \frac{1}{3}$

Compare these fractions (<, >, =). (The denominators in each pair are the same!)

$\frac{3}{12} \bigcirc \frac{1}{12}$ $\frac{5}{9} \bigcirc \frac{4}{9}$ $\frac{2}{4} \bigcirc \frac{5}{4}$ $\frac{1}{7} \bigcirc \frac{6}{7}$

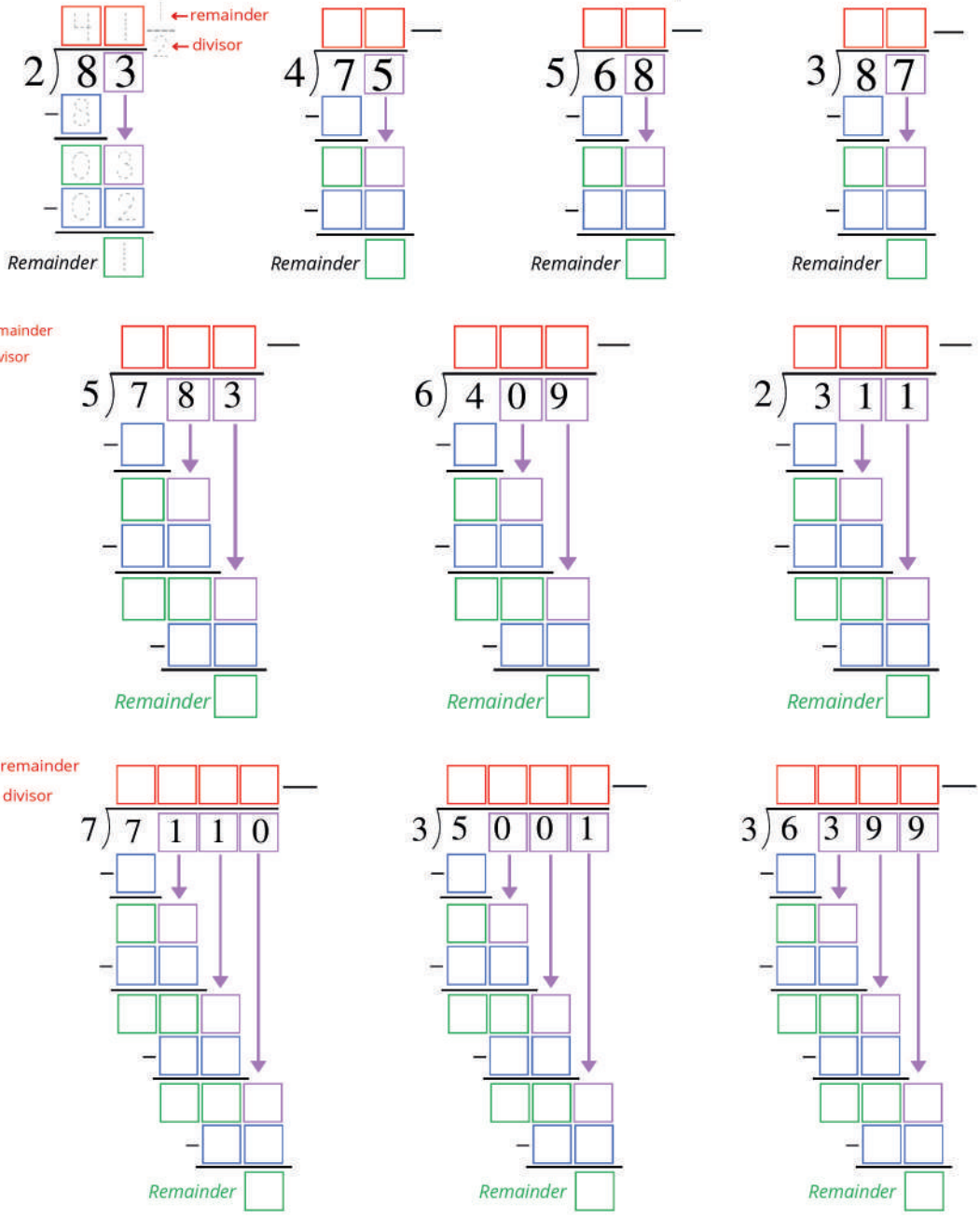
$\frac{3}{6} \bigcirc \frac{4}{6}$ $\frac{2}{5} \bigcirc \frac{3}{5}$ $\frac{1}{3} \bigcirc \frac{2}{3}$ $\frac{7}{8} \bigcirc \frac{2}{8}$

Use your fraction circles to compare these fractions.

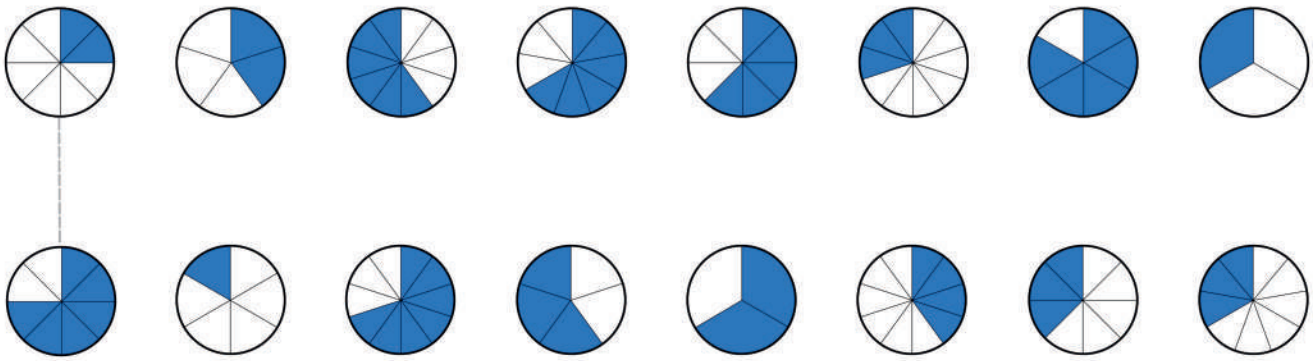
$\frac{3}{5} \bigcirc \frac{5}{6}$ $\frac{3}{4} \bigcirc \frac{2}{5}$ $\frac{4}{10} \bigcirc \frac{5}{8}$ $\frac{4}{9} \bigcirc \frac{3}{7}$

Convert the remainder to a fraction! (Divide the remainder by the divisor) (4.15)

Divide.
Multiply.
Subtract.
Bring Down.
Repeat.



Draw lines to MATCH these fractions so they add up to ONE WHOLE. (3.15)



#18 Date _____

Trace then write each term, then draw a line to match each term to its definition.

prime

factor

composite

prime factorization

multiples

integer

- Numbers with more than two factors.
- The prime numbers which, when multiplied together, make the original number.
- A whole number greater than 1 whose only factors are 1 and itself.
- A number that divides the given number evenly with no remainder.
- The product of two numbers.
- Another name for a whole number.

Find the **multiples** of:

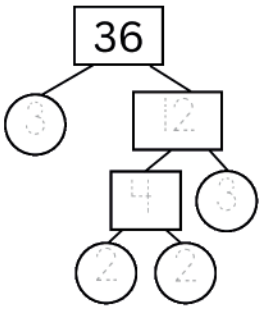
5, 10, 15, ____, ____, ____, ____, ____, ____, ____, ____, ____

2, 4, 6, ____, ____, ____, ____, ____, ____, ____, ____, ____

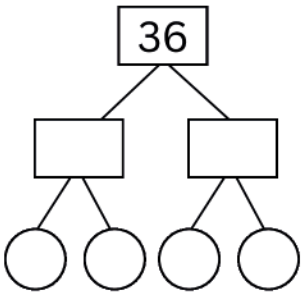
8, 16, 24, ____, ____, ____, ____, ____, ____, ____, ____, ____

List the **factors** of 36: 1, ____, ____, ____, ____, ____, ____, ____, ____, 36

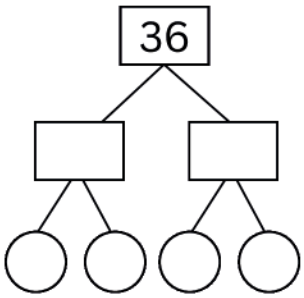
Factor the number in the top box of each factor tree. The composite numbers go in the rectangles and the prime numbers go in the circles.



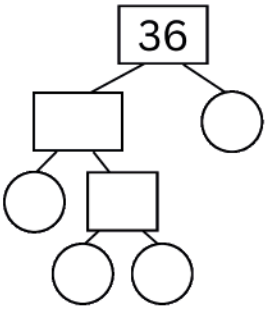
prime factorization: $2^2 \times 3^2$



prime factorization: _____



prime factorization: _____



prime factorization: _____

Grandma was born in 1945. How old will she be this year?

How old was she in the year 2000?

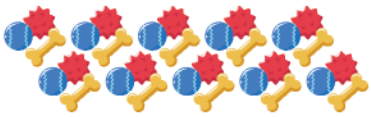
Draw circles to group the items, then complete the equations. (4.16)

$\frac{30}{10} =$ $30 \div 10 =$ $10\overline{)30}$

What is 1/10 of 30?
What is 2/10 of 30?

$\frac{30}{5} =$ $30 \div 5 =$ $5\overline{)30}$

What is 1/5 of 30?
What is 2/5 of 30?



$\frac{30}{2} =$ $30 \div 2 =$ $2\overline{)30}$

What is 1/2 of 30?
What is 2/6 of 30?

WORD PROBLEMS

What times four is three more than five squared?

The square root of 64 is how much less than the square root of 81?

What is 1/5 of forty?

Trace then write each term, then draw a line to match each term to its definition. (3.59)

coefficient

variable

- A letter or symbol that represents a number.
- A number in front of a variable. It gets multiplied by the variable.

coefficient variable

$5A = 20$ (A = 4)

Math Rule:
When you have a VARIABLE and a COEFFICIENT together in a number sentence, they are multiplied together. You don't need a multiplication symbol.

Fill in the missing factors or products to complete each number sentence.

$5 \times \square = 15$

$3 \times \square = 6$

$4 \times \square = 16$

$7 \times \square = 21$

$6 \times \square = 36$

Find the value of the VARIABLE in each number sentence.

See? No multiplication symbol between the variable and the coefficient!

Color the COEFFICIENTS red and the VARIABLES green in these number sentences.

$5X = 15$	$X =$ ____
$3Y = 6$	$Y =$ ____
$4Z = 16$	$Z =$ ____
$7A = 21$	$A =$ ____
$6B = 36$	$B =$ ____

#19 Date _____

List the first ten multiples of:

2, 4, 6, 8, 10, 12, 14, 16, 18, 20

3, 6, 9, 12, 15, 18, 21, 24, 27, 30

4, ____, ____, ____, ____, ____, ____, ____, ____, ____

5, ____, ____, ____, ____, ____, ____, ____, ____, ____

6, ____, ____, ____, ____, ____, ____, ____, ____, ____

7, ____, ____, ____, ____, ____, ____, ____, ____, ____

8, ____, ____, ____, ____, ____, ____, ____, ____, ____

9, ____, ____, ____, ____, ____, ____, ____, ____, ____

Name three common multiples of 2 and 3.

6, 12, 18

Name three common multiples of 3 and 6.

_____, _____, _____

Name two common multiples of 2 and 5.

_____, _____

Name the LEAST common multiple (LCM) of:

4 and 5	3 and 9	3 and 7	6 and 8
_____	_____	_____	_____

Find the equivalent fractions so these fractions have common denominators:

1. Find the least common multiple of both of the denominators. That will be your new denominator.
2. What do you need to multiply the denominator by to make the LCM?
3. Multiply each fraction by ONE to RENAME it with the new denominator.

$\frac{3}{4}$ and $\frac{2}{5}$

LCM of both denominators: 20

Rename both fractions with new COMMON DENOMINATOR.

Multiply first fraction by ONE: $\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}$ (what times 4 is 20? 5)

Multiply second fraction by ONE: $\frac{2}{5} \times \frac{4}{4} = \frac{8}{20}$ (what times 5 is 20? 4)

$\frac{1}{3}$ and $\frac{3}{4}$

LCM of both denominators: _____

Rename both fractions with new COMMON DENOMINATOR.

Multiply first fraction by ONE: $\frac{1}{3} \times \frac{\quad}{\quad} =$

Multiply second fraction by ONE: $\frac{3}{4} \times \frac{\quad}{\quad} =$

$\frac{1}{2}$ and $\frac{3}{5}$

LCM of both denominators: _____

Rename both fractions with new COMMON DENOMINATOR.

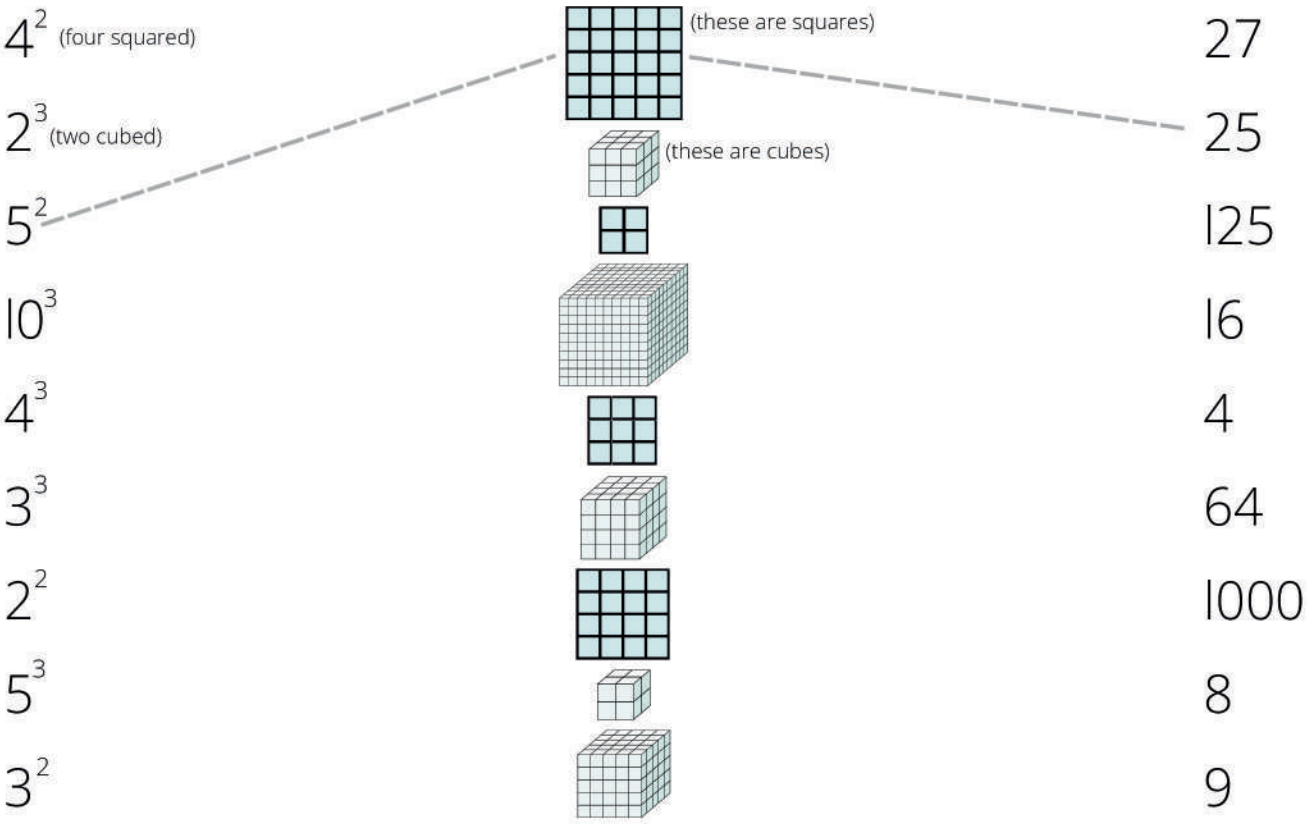
Multiply first fraction by ONE: $\frac{1}{2} \times \frac{\quad}{\quad} =$

Multiply second fraction by ONE: $\frac{3}{5} \times \frac{\quad}{\quad} =$

Find the value of the exponents. (3.41)

Two to the power of zero	$2^0 =$ ____	$3^0 =$ ____
Two to the power of one	$2^1 =$ ____	$3^1 =$ ____
Two squared	$2^2 = 2 \times 2 =$ ____	$3^2 = 3 \times 3 =$ ____
Two cubed	$2^3 = 2 \times 2 \times 2 =$ ____	$3^3 = 3 \times 3 \times 3 =$ ____
Two to the power of four	$2^4 = 2 \times 2 \times 2 \times 2 =$ ____	$3^4 = 3 \times 3 \times 3 \times 3 =$ ____
Two to the power of five	$2^5 = 2 \times 2 \times 2 \times 2 \times 2 =$ ____	$3^5 = 3 \times 3 \times 3 \times 3 \times 3 =$ ____

Draw lines to connect each column. (3.41)



Find the positive square roots. (3.42)

$\sqrt{16} =$ ___	$\sqrt{25} =$ ___	$\sqrt{36} =$ ___	$\sqrt{9} =$ ___	$\sqrt{4} =$ ___
$\sqrt{81} =$ ___	$\sqrt{1} =$ ___	$\sqrt{64} =$ ___	$\sqrt{100} =$ ___	$\sqrt{49} =$ ___

#20 Date _____

Add these fractions. You can only add fractions with common denominators.

1. Find the LEAST COMMON MULTIPLE of both denominators.
2. RENAME both fractions. Multiply each of them by ONE, to find their EQUIVALENT fractions.

$\frac{1}{5}+\frac{3}{5}=$	$\frac{1^{2}}{4_{8}}+\frac{3}{8}=$	$\frac{1^{2}}{2_{4}}+\frac{1}{4}=$	$\frac{1^{3}}{2_{6}}+\frac{1^{2}}{3_{6}}=$
$\frac{2}{3}+\frac{1}{4}=$	$\frac{2}{9}+\frac{2}{3}=$	$\frac{1}{2}+\frac{1}{8}=$	$\frac{5}{6}+\frac{1}{12}=$

Subtract these fraction. Find a common denominator first.

$\frac{4}{5}-\frac{2}{5}=$	$\frac{1^{2}}{2_{4}}-\frac{1}{4}=$	$\frac{2^{4}}{3_{6}}-\frac{1^{3}}{2_{6}}=$	$\frac{4^{8}}{5_{10}}-\frac{1^{5}}{2_{10}}=$
$\frac{2}{3}-\frac{1}{4}=$	$1-\frac{1}{4}=$	$\frac{3}{4}-\frac{1}{8}=$	$\frac{5}{6}-\frac{1}{3}=$

Round each number to the nearest 10; add the rounded numbers mentally. (4.11)

65 + 25

70 + 30 = _____

51 + 86

_____ + _____ = _____

22 + 49

_____ + _____ = _____

55 + 54

_____ + _____ = _____

This is a tricky puzzle. What number does each letter represent? (3.59)

$X+X+X=21$

$X+2Y=15$

$3Z+1=31$

$X+Z+2Y=$ ☐

$5^{2}-Y=$ ☐

$2Z-5=$ ☐

$X+11=$ ☐

$2-Y=$ ☐

$X=$ ☐

$Y=$ ☐

$Z=$ ☐

You started reading at 1:07. You devoured your book in 2 hours and twenty-five minutes. What time did you finish? (2.60)

begin

finish

time	hours	minutes
1:07	add 2 to the HOURS	add 25 to the MINUTES
3:07		1
		+7
		32
3:32		

You need to bake 5 dozen cookies for a family party. You need to leave for the party at 5:00. It takes 20 minutes per dozen to bake the cookies. What time is the latest you could start baking?

begin

finish

time	hours	minutes

Your flight from Dallas to Mexico City takes 5 hours and 54 minutes. If your flight leaves at 10:05 what time are you scheduled to arrive? (no time zone changes)

begin

finish

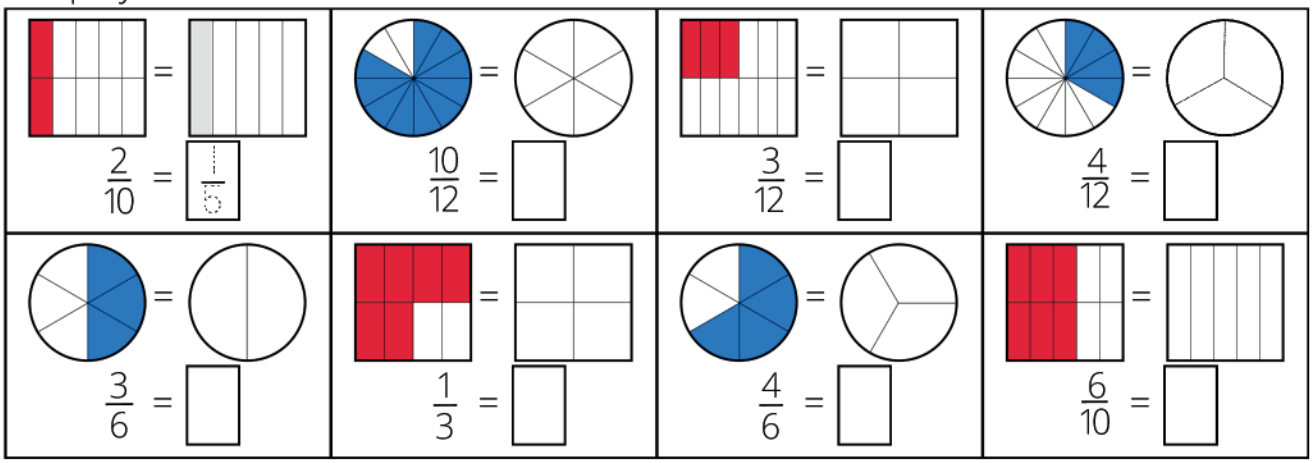
time	hours	minutes

Adding or subtracting by place value (3.8)

add/subtract 1 in the ONES place		add/subtract 1 in the TENS place		add/subtract 1 in the HUNDREDS place	
1 less	1 more	10 less	10 more	100 less	100 more
16, 17, 18		317, 327, 337		89, 189, 289	
___, 105, ___		___, 710, ___		___, 899, ___	
___, 298, ___		___, 214, ___		___, 503, ___	

#21 Date _____

Simplify these fractions.



$\frac{3}{6}$ = $\frac{5}{4}$ = $\frac{12}{4}$ = $\frac{6}{8}$ = $\frac{5}{5}$ = $\frac{36}{6}$ =

Draw lines to match terms. (3.40)

indeterminate	$\frac{1}{0}$
mixed number	$\frac{0}{0}$
0	$\frac{1}{1}$
undefined	2
whole number	$\frac{0}{1}$
1	$\frac{35}{4}$
improper fraction	$1\frac{1}{2}$

Trace then write each term.

indeterminate

mixed number

undefined

whole number

integer

improper fraction

This is a tricky puzzle. What number does each letter represent? (3.59)

$X^2 = 64$

$2Y + 1 = 23$

$3Z - Y = 16$

$X + 2Y + Z =$ ☐

$3^2 - X =$ ☐

$5Y - 6^2 =$ ☐

$Z - Y =$ ☐

$2^2 - X =$ ☐

$X =$ ☐

$Y =$ ☐

$Z =$ ☐

Color the coins needed to buy each item. (2.51)

If I pay for my meal with a ten dollar bill, what is my change? (2.51)

Adding or subtracting by place value (3.8)

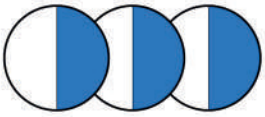
add/subtract 2 in the ONES place			add/subtract 2 in the TENS place			add/subtract 2 in the HUNDREDS place		
2 less		2 more	20 less		20 more	200 less		200 more
54	56	58	325	345	365	237	437	637
___	87	___	___	152	___	___	391	___
___	104	___	___	324	___	___	509	___

#22 Date _____

Multiply fractions by WHOLE numbers. Always simplify!

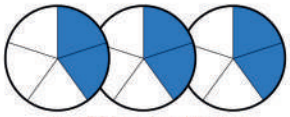
improper fraction

$\frac{1}{2} \times 3 = \frac{3}{1} = \frac{3}{2} = 1\frac{1}{2}$



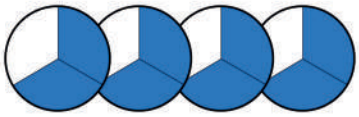
one half, three times

$\frac{2}{5} \times 3 =$



two fifths, three times

$\frac{2}{3} \times 4 =$

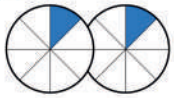


two thirds, four times

$\frac{3}{5} \times 3 =$

simplify BEFORE multiplying

$\frac{1}{8} \times 2 = \frac{1}{4}$



simplify BEFORE multiplying

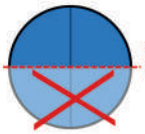
$\frac{5}{6} \times 6 = 5$

simplify BEFORE multiplying

$\frac{3}{4} \times 2 =$

Multiply fractions by fractions. Always simplify!

$\frac{4}{4} \times \frac{1}{2} = \frac{4}{8} = \frac{1}{2}$



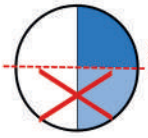
one half OF one whole

simplify BEFORE multiplying

$\frac{3}{5} \times \frac{1}{3} = \frac{1}{5}$

one third OF three fifths

$\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$



one half OF one half

$\frac{1}{5} \times \frac{1}{2} =$

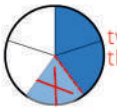
one half OF one fifth

$\frac{1}{2} \times \frac{3}{4} =$

three fourths OF one half

simplify BEFORE multiplying

$\frac{3}{5} \times \frac{2}{3} =$



two thirds OF three fifths

simplify BEFORE multiplying

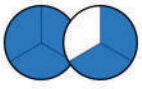
$\frac{7}{8} \times \frac{2}{3} =$

two thirds OF seven eighths

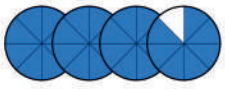
Convert the mixed numbers to improper (top heavy) fractions.

$1\frac{1}{5} = \frac{6}{5}$

$1\frac{2}{3} =$



$3\frac{7}{8} =$

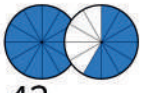


$1\frac{5}{6} =$

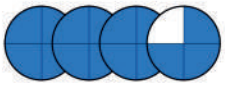
$2\frac{3}{4} =$

Convert the improper fractions to mixed numbers.

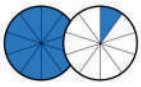
$\frac{19}{12} = 1\frac{7}{12}$



$\frac{15}{4} =$



$\frac{11}{10} =$



$\frac{16}{6} =$

$\frac{4}{3} =$

List the first six multiples of:

2, 4, 6, 8, 10, 12, 14

3, ___, ___, ___, ___, ___, ___

4, ___, ___, ___, ___, ___, ___

6, ___, ___, ___, ___, ___, ___

8, ___, ___, ___, ___, ___, ___

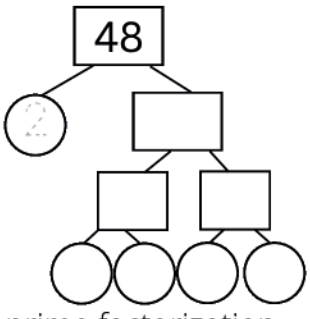
12, ___, ___, ___, ___, ___, ___

Name the LEAST common multiple (LCM) of: (4.19)

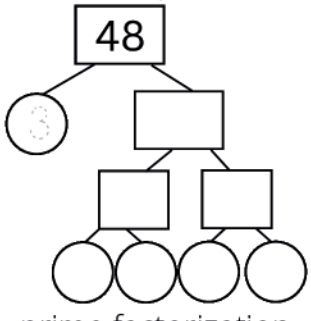
2 and 3	2 and 6	3 and 4
_____	_____	_____
2 and 8	2 and 4	6 and 12
_____	_____	_____

List the **factors** of 48: 1, ___, ___, ___, ___, ___, ___, ___, ___, 48

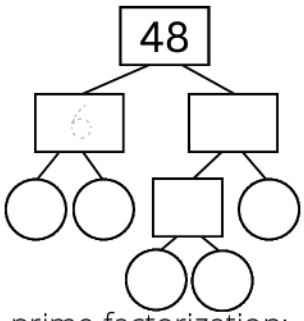
Factor the number in the top box of each factor tree. The composite numbers go in the rectangles and the prime numbers go in the circles.



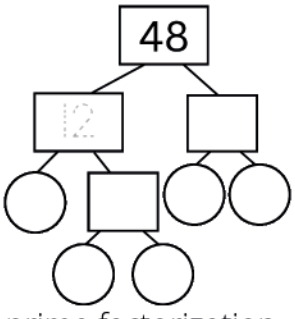
prime factorization: $2^4 \times 3$



prime factorization: _____



prime factorization: _____



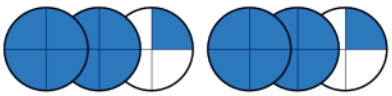
prime factorization: _____

Multiply fractions by Mixed numbers. Always simplify! convert the mixed number to an improper fraction first

$1\frac{1}{2} \times 2 = \frac{3}{2} \times \frac{2}{1} = \frac{6}{2} = 3$

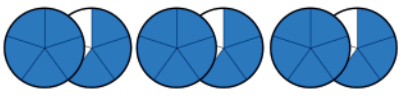
one and one half, twice

$2\frac{1}{4} \times 2 = \frac{9}{4} \times 2 = \quad =$



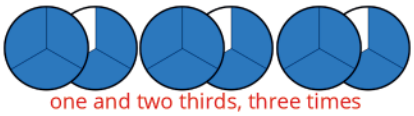
two and one fourth, twice

$1\frac{3}{5} \times 3 = \quad =$



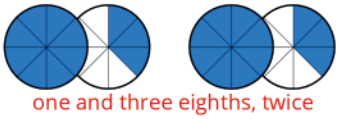
one and three fifths, three times

$1\frac{2}{3} \times 3 =$



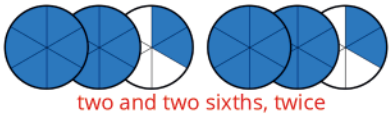
one and two thirds, three times

$1\frac{3}{8} \times 2 = \quad =$



one and three eighths, twice

$2\frac{2}{6} \times 2 = \quad =$



two and two sixths, twice

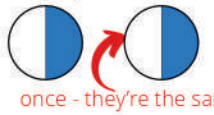
#23 Date _____

Divide fractions by fractions. Always simplify!

Never divide by a fraction, instead multiply by the reciprocal.

$\frac{1}{2} \div \frac{1}{2} = \frac{1}{2} \times \frac{2}{1} = \frac{2}{2} = 1$

how many times will 1/2 go into 1/2?



once - they're the same size!

$\frac{2}{3} \div \frac{1}{3} = \frac{2}{3} \times \frac{3}{1} = \frac{6}{3} = 2$

how many times will 1/3 fit into 2/3?

twice!

$\frac{7}{8} \div \frac{1}{4} = \frac{7}{8} \times \frac{4}{1} = \frac{28}{8} = 3\frac{4}{8} = 3\frac{1}{2}$

how many times will 1/4 fit into 7/8?

three times AND one half of a time

$\frac{2}{5} \div \frac{1}{5} =$ $\frac{5}{6} \div \frac{1}{3} =$ $\frac{3}{4} \div \frac{1}{8} =$ $\frac{3}{4} \div \frac{1}{4} =$

Divide whole numbers by fractions. Always simplify!

Never divide by a fraction, instead multiply by the reciprocal.

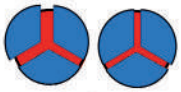
$2 \div \frac{1}{2} = 2 \times \frac{2}{1} = 4$

how many times will 1/2 go into 2?

four times!

$2 \div \frac{1}{3} = 2 \times \frac{3}{1} =$

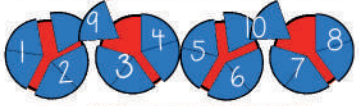
how many times will 1/3 fit into 2?



six times!

$4 \div \frac{2}{5} = 4 \times \frac{5}{2} =$

how many times will 2/5 fit into 4?



once AND another 1/2 of 1/4

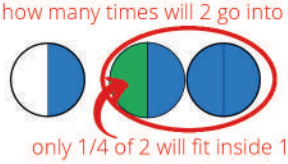
$3 \div \frac{3}{8} =$ $1 \div \frac{1}{8} =$ $5 \div \frac{5}{6} =$ $3 \div \frac{1}{4} =$

Divide fractions by whole numbers. Always simplify!

Never divide by a fraction, instead multiply by the reciprocal.

$\frac{1}{2} \div 2 = \frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$

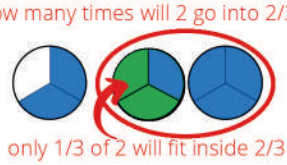
how many times will 2 go into 1/2?



only 1/4 of 2 will fit inside 1/2

$\frac{2}{3} \div 2 = \frac{2}{3} \times \frac{1}{2} = \frac{2}{6} = \frac{1}{3}$

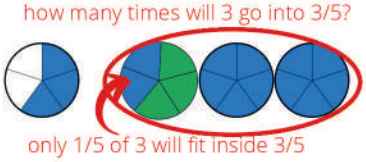
how many times will 2 go into 2/3?



only 1/3 of 2 will fit inside 2/3

$\frac{3}{5} \div 3 = \frac{3}{5} \times \frac{1}{3} =$ $=$

how many times will 3 go into 3/5?



only 1/5 of 3 will fit inside 3/5

$\frac{3}{4} \div 2 =$ $\frac{3}{4} \div 3 =$ $\frac{7}{8} \div 2 =$ $\frac{7}{8} \div 3 =$

How much change will you receive if you pay for each item with $1.00? Write each amount using a cent sign then a dollar sign. (3.18)

¢ _____ ¢ _____ ¢ _____

$ _____ $ _____ $ _____

Find the lowest common denominator (LCD) of each group of fractions. Then RENAME each fraction using the LCD. Then order the fractions from the least to the greatest. (4.19)

Fractions LCD ____	$\frac{2}{6}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{1}{4}$
Equivalent Fractions with LCD					
Order fractions least to greatest					

Fractions LCD ____	$\frac{1}{5}$	$\frac{9}{9}$	$\frac{2}{3}$	$\frac{9}{12}$	$\frac{5}{6}$
Equivalent Fractions with LCD					
Order fractions least to greatest					

Draw a rectangle that shows 2 x 3.
Shade one third of the rectangle.

The operators are missing! Insert the correct operator (+, -, x) in each yellow circle to make the number sentence true. All answers have been simplified. (4.22 and 4.23)

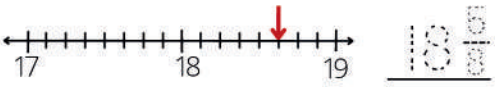
$\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$ $\quad \frac{2}{3} \bigcirc \frac{3}{4} = \frac{17}{12} = 1\frac{5}{12}$ $\quad \frac{5}{6} \bigcirc \frac{2}{5} = \frac{1}{3}$ $\quad \frac{1}{2} \bigcirc \frac{2}{4} = 1$

$\frac{3}{7} \bigcirc \frac{5}{7} = 1\frac{1}{7}$ $\quad \frac{1}{4} \bigcirc \frac{2}{3} = \frac{1}{6}$ $\quad \frac{3}{4} \bigcirc \frac{2}{5} = \frac{7}{20}$ $\quad \frac{4}{5} \bigcirc \frac{2}{3} = \frac{2}{15}$

$\frac{2}{5} \bigcirc \frac{3}{5} = \frac{6}{25}$ $\quad \frac{1}{2} \bigcirc 2 = 2\frac{1}{2}$ $\quad \frac{2}{3} \bigcirc \frac{1}{3} = 2$ $\quad \frac{1}{2} \bigcirc \frac{1}{3} = \frac{3}{2} = 1\frac{1}{2}$

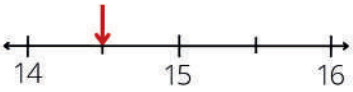
#24 Date _____

To which mixed number does each arrow point?

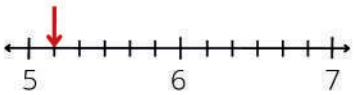


$18\frac{5}{8}$

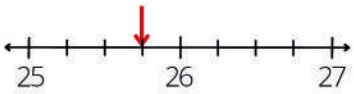
_____



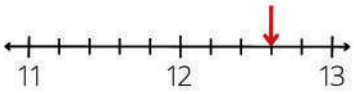
_____



_____



_____



_____

Use words to write $17\frac{2}{3}$ _____

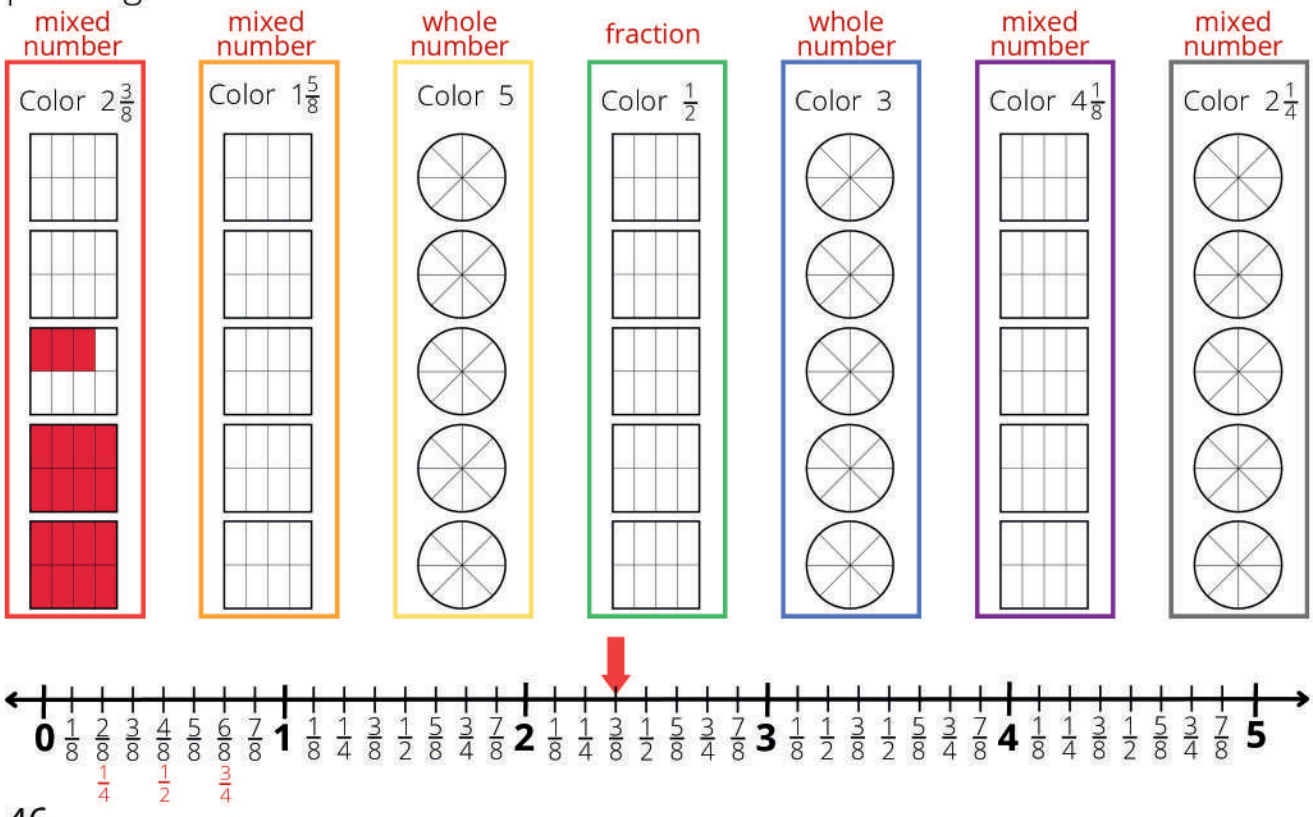
What is $\frac{1}{2}$ of 2?

What is $\frac{1}{4}$ of 12?

What is $\frac{3}{4}$ of 16?

What is $\frac{3}{5}$ of 15?

Color the number in each colored rectangle. Then draw an arrow that color pointing to the number on the number line below.



Divide the dice into TWO equal groups. (4.16)

What is 1/2 of 36?

What is 2/2 of 36?

Divide the dice into FOUR equal groups.

What is 1/4 of 36?

What is 2/4 of 36?

What is 3/4 of 36?

What is 4/4 of 36?

Divide the dice into SIX equal groups.

What is 1/6 of 36?

What is 2/6 of 36?

What is 3/6 of 36?

What is 4/6 of 36?

What is 5/6 of 36?

What is 6/6 of 36?

Divide the dice into NINE equal groups.

What is 1/9 of 36?

What is 2/9 of 36?

What is 3/9 of 36?

What is 4/9 of 36?

What is 5/9 of 36?

What is 6/9 of 36?

What is 7/9 of 36?

What is 8/9 of 36?

What patterns do you see in these problems?

There are three apples in a small bag. The medium-sized bag has twice that number of apples. The box has five times as many apples as the small bag.

How many apples are in the medium-sized bag? _____

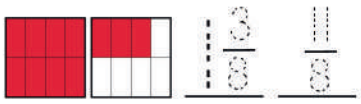
How many apples are in each box? _____

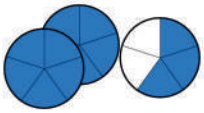
The small bag of apples costs $3.30. The medium-sized bag of apples costs $5.70. How much more per apple do the apples in the small bag cost?

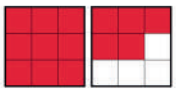
The box of apples costs $12.00. What is the cost per apple in the box?

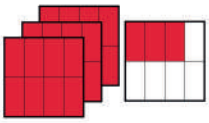
#25 Date _____

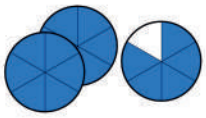
Name these fractions as mixed numbers and improper fractions.

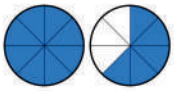


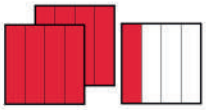






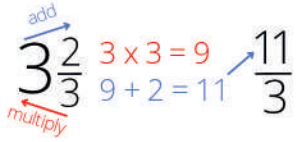




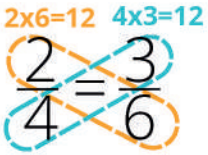


Use words to write $15\frac{3}{4}$ _____

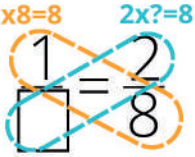
Draw and shade circles to show that $3\frac{2}{3}$ equals $\frac{11}{3}$.



Use the Butterfly Method to find the missing digits.



$\frac{3}{\square} = \frac{6}{10}$



$\frac{\square}{12} = \frac{4}{6}$

$\frac{3}{4} = \frac{\square}{8}$

$\frac{2}{5} = \frac{\square}{10}$

$\frac{2}{8} = \frac{4}{\square}$

$\frac{\square}{6} = \frac{6}{9}$

Find the first three equivalent fractions. Draw fraction circles to match. (2.56)

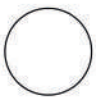
$\frac{3}{4}$ 

$\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$ 

$\frac{3}{4} \times \frac{3}{3} =$ 

$\frac{3}{4} \times \frac{4}{4} =$ 

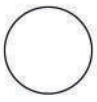
$\frac{1}{3}$ 

$\frac{1}{3} \times \frac{2}{2} =$ 

$\frac{1}{3} \times \frac{3}{3} =$ 

$\frac{1}{3} \times \frac{4}{4} =$ 

$\frac{1}{2}$ 

$\frac{1}{2} \times \frac{2}{2} =$ 

$\frac{1}{2} \times \frac{3}{3} =$ 

$\frac{1}{2} \times \frac{4}{4} =$ 

Fill in the missing factors or products to complete each number sentence.

$2 \times \square = 18$

$5 \times \square = 35$

$7 \times \square = 56$

$3 \times \square = 36$

$8 \times \square = 48$

$6 \times \square = 42$

Find the value of the VARIABLE in each number sentence. (3.59)

coefficient variable

$2A = 18$ A = ____

Color the COEFFICIENTS red and the VARIABLES green in these number sentences.

$5B = 35$ B = ____

$7C = 56$ C = ____

$3X = 36$ X = ____

$8Y = 48$ Y = ____

$6Z = 42$ Z = ____

This is a tricky puzzle. What number does each letter represent? (3.59)

$X^2 = 64$

$X + Y^2 = 57$

$5Z = 45$

$Z^2 - XY = \square$

variables next to each other are multiplied.

square roots are also called radicals

a radical is multiplied by the coefficient in front of it

$YZ = \square$

$3\sqrt{Z} = \square$

$X - 2^3 = \square$

$XY = \square$

$X = \square$

$Y = \square$

$Z = \square$

Solve using the Order of Operations (PEMDAS) (3.83):

$3(5 - 1) \div 2 =$ _____

$(8 + 4) \div (1 + 2) =$ _____

$2 - 3 \times 2 =$ _____

$2 - 56 \div 7 =$ _____

$1 - 5 \times 2 =$ _____

$\sqrt{7 + 3 \times 3} =$ _____

$9^2 - 7^2 =$ _____

$5 - 2(8 - 6) =$ _____

$6(16 \div 2) \div 12 =$ _____

$15 \div 5 - 3 =$ _____

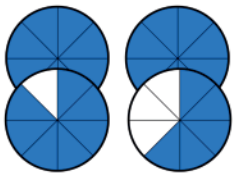
$12 - 15 \div 3 =$ _____

$10 \div 2 - 5 =$ _____

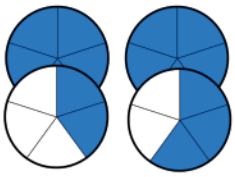
#26 Date _____

Find the sum. Remember to simplify your answer!

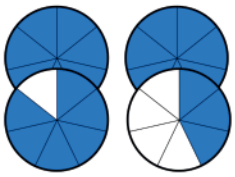
$1\frac{7}{8} + 1\frac{5}{8} = 2\frac{12}{8} = 3\frac{1}{2}$



$1\frac{2}{5} + 1\frac{3}{5} =$



$1\frac{6}{7} + 1\frac{3}{7} =$



$2\frac{2}{3} + 1\frac{5}{6}$

$4\frac{3}{4} + 2\frac{5}{8}$

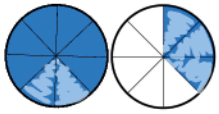
$3\frac{1}{3} + 1\frac{3}{4}$

$5\frac{1}{4} + 2\frac{1}{2}$

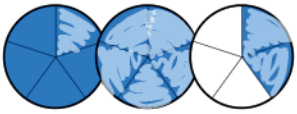
$2\frac{2}{3} + 3\frac{1}{4}$

Find the difference. Remember to simplify your answer!

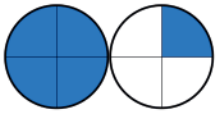
~~$1\frac{3}{8}$~~ $\frac{11}{8} - \frac{5}{8} = \frac{6}{8} = \frac{3}{4}$



~~$2\frac{2}{5}$~~ $\frac{12}{5} - $ ~~$1\frac{3}{5}$~~ $\frac{8}{5} =$



$1\frac{1}{4} - \frac{3}{4} =$



$2\frac{1}{3} - 1\frac{2}{3}$

$3\frac{5}{6} - 2\frac{1}{3}$

$4\frac{1}{3} - 2\frac{3}{4}$

$3\frac{1}{2} - 3\frac{1}{4}$

$2\frac{2}{3} - 1\frac{1}{2}$

If 2 apples cost 80 cents, how much money will 3 apples cost?

There are 60 minutes in 1 hour and 24 hours in 1 day. How many minutes are in 1 day?

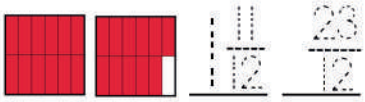
add

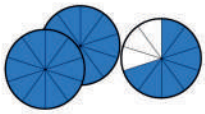
$2\frac{1}{4}$ $4 \times 2 = 8$ $8 + 1 = 9$ $\frac{9}{4}$

multiply

Draw and shade circles to show that $2\frac{1}{4}$ equals $\frac{9}{4}$.

Name these fractions as mixed numbers and improper fractions. (4.25)





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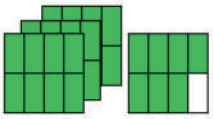
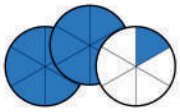


___ ___



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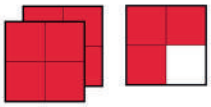
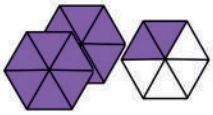


___ ___



___ ___

Convert these improper fractions to mixed numbers. (4.25)

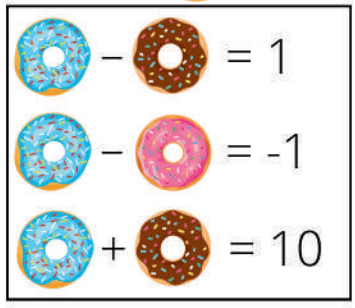
$\frac{21}{8} = 2\frac{5}{8}$ $\frac{15}{7} =$ $\frac{16}{5} =$ $\frac{13}{6} =$

$\frac{11}{2} =$ $\frac{23}{8} =$ $\frac{8}{3} =$ $\frac{13}{4} =$

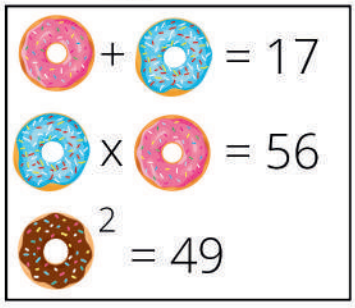
$\frac{10}{9} =$ $\frac{14}{6} =$ $\frac{24}{5} =$ $\frac{18}{7} =$

Each group contains two truths and a lie. Circle the LIE in each group. Follow the order of operations (PEMDAS). (3.83)

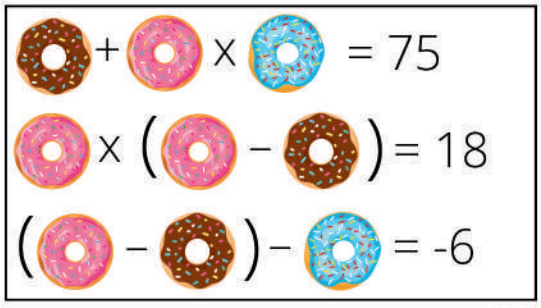

= 8




= 7




= 9



#27 Date _____

Draw a picture and write a number sentence to help you solve these word problems.

At the school sale, you bought 3 boxes of pencils with 98 pencils each. How many pencils do you have? 	Your little brother ate 71 of the jelly beans in the jar. There are only 17 jelly beans left. How many jelly beans were there originally? 
Each meal at the food truck was $9.89. How much will 6 meals cost? 	You bought a box of 96 crayons. You have used it for a year. It currently has 49 crayons. How many are missing? 
You buy 4 books each week at the bookstore. How many books will you have after 1 year? 	You are 52 inches tall. You are 19 inches taller than your brother. How tall is he? 
Each Christmas card costs 55 cents. How much will 9 cards cost? 	We need 96 peaches for our family reunion. If each box holds 12 peaches, how many boxes do need to buy? 

Find the products. Always simplify! (3.22) Simplify BEFORE multiplying whenever you can

simplify BEFORE multiplying: $\frac{2}{3} \times \frac{1}{2} = \frac{1}{3}$

simplify BEFORE multiplying: $\frac{1}{3} \times \frac{3}{4} =$

$5 \times \frac{1}{8} =$

simplify BEFORE multiplying: $\frac{3}{4} \times \frac{1}{3} =$

$\frac{1}{3} \times \frac{3}{8} =$

$2 \times \frac{1}{6} =$

$\frac{3}{5} \times \frac{5}{6} =$

$3 \times \frac{1}{3} =$

$\frac{1}{4} \times \frac{1}{3} =$

$\frac{1}{2} \times \frac{2}{3} =$

$3 \times \frac{3}{4} =$

$\frac{3}{4} \times \frac{1}{4} =$

$2 \times \frac{3}{5} =$

$5 \times \frac{1}{3} =$

$\frac{3}{8} \times \frac{2}{5} =$

$2 \times \frac{2}{5} =$

Find the quotients. Always simplify!

Never divide by a fraction, instead multiply by the reciprocal.

simplify BEFORE multiplying: $\frac{2}{5} * \frac{1}{5} \times \frac{5}{1} = \frac{2}{1} = 2$

$\frac{1}{4} \div \frac{1}{4} =$

$\frac{3}{5} \div \frac{1}{3} =$

$\frac{5}{6} \div \frac{3}{4} =$

$2 \div \frac{5}{8} =$

$\frac{3}{4} \div \frac{1}{8} =$

$1 \div \frac{1}{6} =$

$\frac{3}{5} \div \frac{1}{5} =$

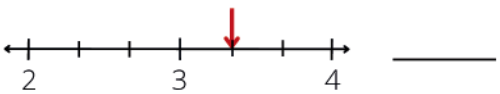
$\frac{2}{5} \div \frac{1}{5} =$

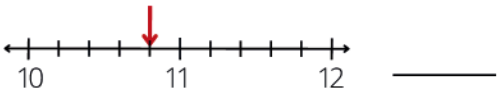
$3 \div \frac{1}{4} =$

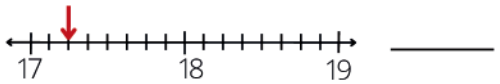
$\frac{3}{4} \div \frac{1}{2} =$

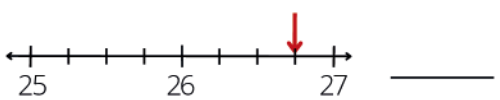
$4 \div \frac{1}{4} =$

To which mixed number does each arrow point? (4.24)

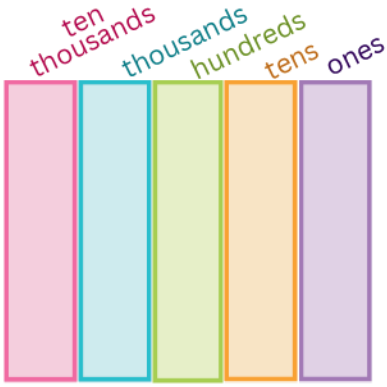








#28 Date _____

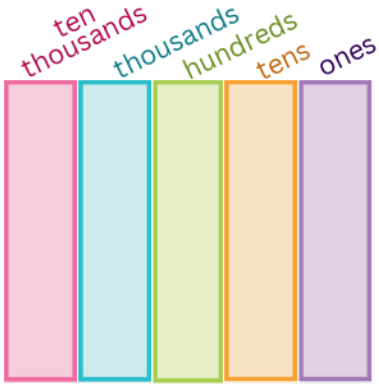


7 x 1 =

7 x 10 =

7 x 100 =

7 x 1000 =



7 x 3 =

7 x 30 =

7 x 300 =

7 x 3000 =

3 x 10 = _____
3 x 30 = _____

3 x 100 = _____
3 x 300 = _____

3 x 1000 = _____
3 x 3000 = _____

5 x 10 = _____
5 x 20 = _____

5 x 100 = _____
5 x 200 = _____

5 x 1000 = _____
5 x 2000 = _____

4 x 10 = _____
4 x 80 = _____

4 x 100 = _____
4 x 800 = _____

4 x 1000 = _____
4 x 8000 = _____

Find the sums and differences. Find a common denominator first. Simplify. (3.20)

1. Find the LEAST COMMON MULTIPLE of both denominators.
2. RENAME both fractions. Multiply each of them by ONE, to find their EQUIVALENT fractions.

$\frac{1}{3} + \frac{3}{4} = \frac{13}{12} = 1\frac{1}{12}$ $\quad \frac{1}{4} + \frac{5}{8} =$ $\quad \frac{1}{2} + 1 =$ $\quad \frac{1}{2} + \frac{5}{6} =$

$\frac{2}{3} + \frac{1}{9} =$ $\quad \frac{1}{4} + \frac{2}{3} =$ $\quad \frac{1}{2} + \frac{1}{4} =$ $\quad \frac{1}{6} + \frac{1}{3} =$

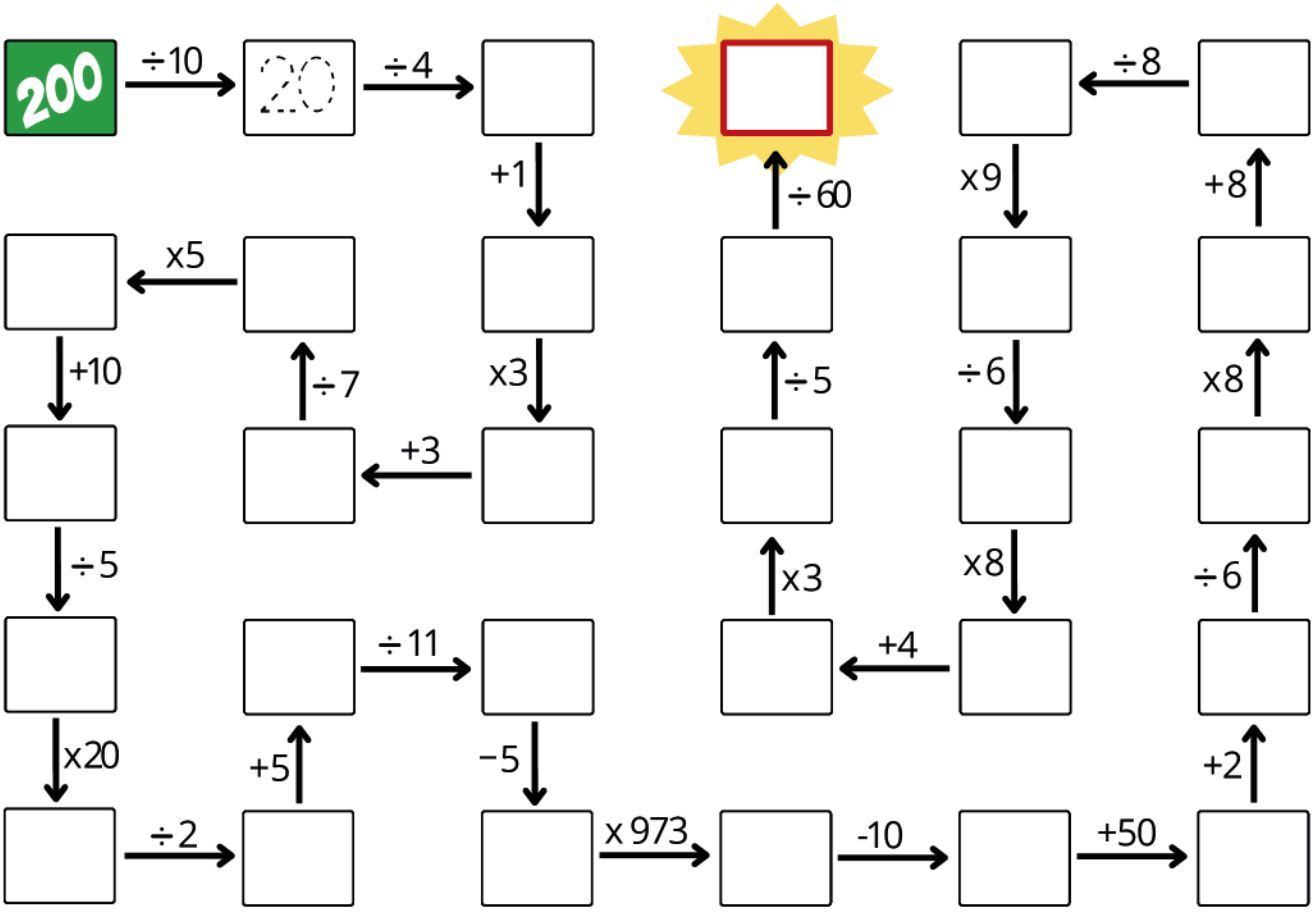
$5 - \frac{2}{5} =$ $\quad \frac{3}{4} - \frac{1}{8} =$ $\quad \frac{1}{2} - \frac{1}{3} =$ $\quad \frac{3}{4} - \frac{1}{3} =$

$\frac{5}{6} - \frac{1}{3} =$ $\quad \frac{2}{3} - \frac{1}{4} =$ $\quad \frac{1}{2} - \frac{1}{4} =$ $\quad 1 - \frac{1}{4} =$

You had 15 marbles. You won twice that many from your friend. How many marbles do you have now?

Babies need their diapers changed every two hours all day and night. A box of 48 diapers costs $20.00. How much will diapers cost every four weeks?

Fill in the missing numbers to complete the number snake.



Your mom puts star stickers on your chore chart and your sisters chore chart every day after you complete your chores. The package originally had 124 stickers. You and your sister have earned an equal amount. There are 38 stickers left. How many stickers do you have?

#29 Date _____

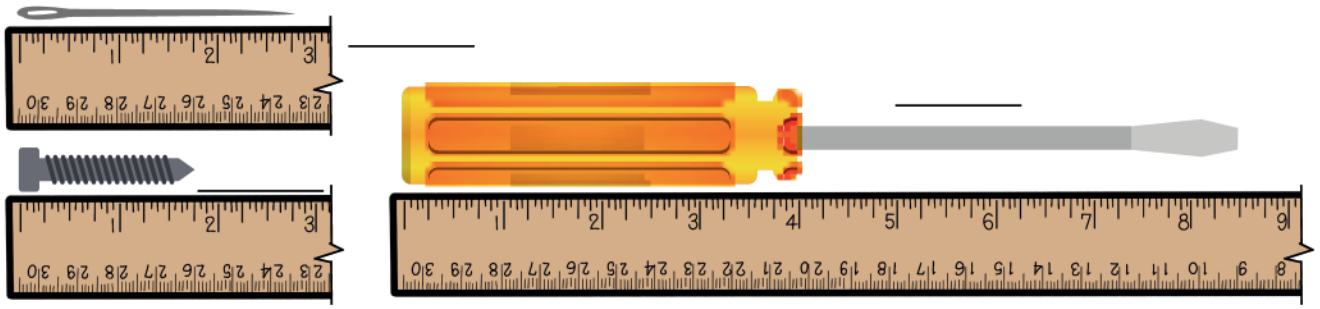
Find the missing numbers to complete each equation. (3.36)

315 + ☐ = 537	☐ + 104 = 555	253 - ☐ = 151	☐ - 131 = 107	382 + ☐ = 588

Find the value of X in each equation and write it in the box below.

147 + X = 349	X + 106 = 301	367 + X = 533	X - 238 = 221	575 - X = 113
X= ☐	X= ☐	X= ☐	X= ☐	X= ☐

Find the length of each item to the nearest quarter inch. Use units! (3.20)



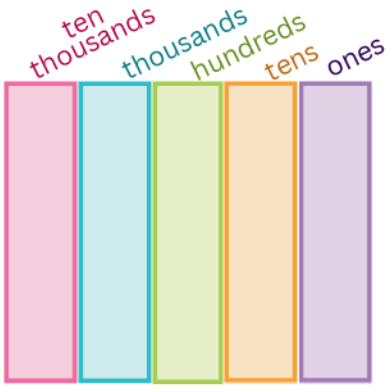
See? No multiplication symbol between the variable and the coefficient!

coefficient variable

5 x ☐ = 15 $\qquad$ 5X = 15 $\qquad$ X = ____

Find the value of the VARIABLE in each number sentence.

3Z = 21	Z = ____	8C = 56	C = ____
5A = 25	A = ____	7S = 42	S = ____
9X = 36	X = ____	2T = 24	T = ____
4B = 28	B = ____	5V = 40	V = ____
6Y = 48	Y = ____	3R = 36	R = ____

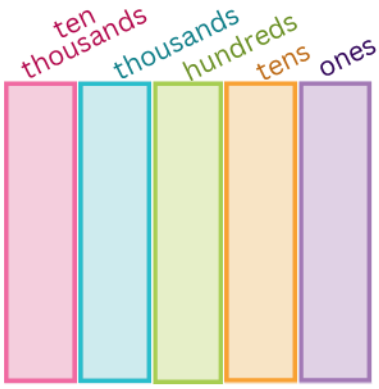


9 x 1 =

9 x 10 =

9 x 100 =

9 x 1000 =



9 x 4 =

9 x 40 =

9 x 400 =

9 x 4000 =

7 x 10 = _____	7 x 100 = _____	7 x 1000 = _____
7 x 50 = _____	7 x 500 = _____	7 x 5000 = _____
2 x 10 = _____	2 x 100 = _____	2 x 1000 = _____
2 x 80 = _____	2 x 800 = _____	2 x 8000 = _____
6 x 10 = _____	6 x 100 = _____	6 x 1000 = _____
6 x 60 = _____	6 x 600 = _____	6 x 6000 = _____

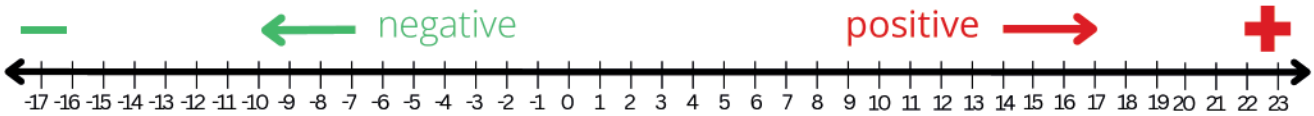
WORD PROBLEMS

quantity means parentheses (7 + 1)

What is twice the quantity of seven and one?

The quantity of seven and three is equal to the quantity of what number and two?

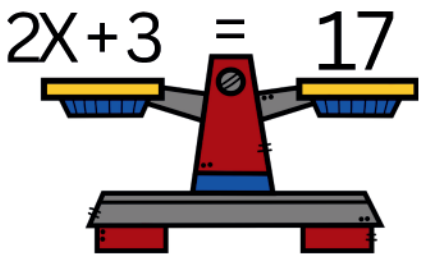
Use the number line to find each sum or difference. (3.58)



5 - 7 = ____	-5 + 16 = ____	6 - 14 = ____
7 - 5 = ____	11 - 12 = ____	13 - 20 = ____
-7 - 5 = ____	-3 - 5 = ____	-9 - -3 = ____
-7 + 5 = ____	-10 + 9 = ____	-2 + -5 = ____

#30 Date _____

Solve for x: (get x by itself!)



UNDO everything that has been done to the X

Step 1: subtract 3 from BOTH sides

$2X+3=17$
$-3 \quad -3$

Step 2: divide BOTH sides of the equation by 2.

$\frac{2X}{2} = \frac{14}{2}$
$X=7$

Step 3: Check your answer by replacing X with the solution.

true! $(2 \cdot 7) + 3 = 17$

I used a dot to represent multiplication because an x could have been confused with a variable.

Solve for the variable:

$X + 5 = 15$	$X =$ _____	$36 \div X = 9$	$X =$ _____
$X + 21 = 35$	$X =$ _____	$8X = 56$	$X =$ _____
$22 - X = 11$	$X =$ _____	$8^2 + 2X = 72$	$X =$ _____
$8 + 2X = 32$	$X =$ _____	$9X = \sqrt{81}$	$X =$ _____
$5X - 1 = 24$	$X =$ _____	$X \div 2 = 8$	$X =$ _____
$3 + 12X = 75$	$X =$ _____	$4 + 8X = 20$	$X =$ _____

WORD PROBLEMS

Eight times four is how much less than six squared?

Three cubed is how much more than three times five?

Solve using the Order of Operations (PEMDAS). (3.83)

$3 \times 6 - 2 \times 4 =$ _____	$4^2 \div \sqrt{64} =$ _____
$2^3 - \sqrt{36} =$ _____	$5 + 15 \div 3 =$ _____
$5(5 + 3) =$ _____	$8 + 2 \times 2 =$ _____
$2 + 16 \div 4 =$ _____	$3 \times 3 - 2^2 =$ _____
$8 \div (56 \div 7) =$ _____	$12(4 + 4) =$ _____

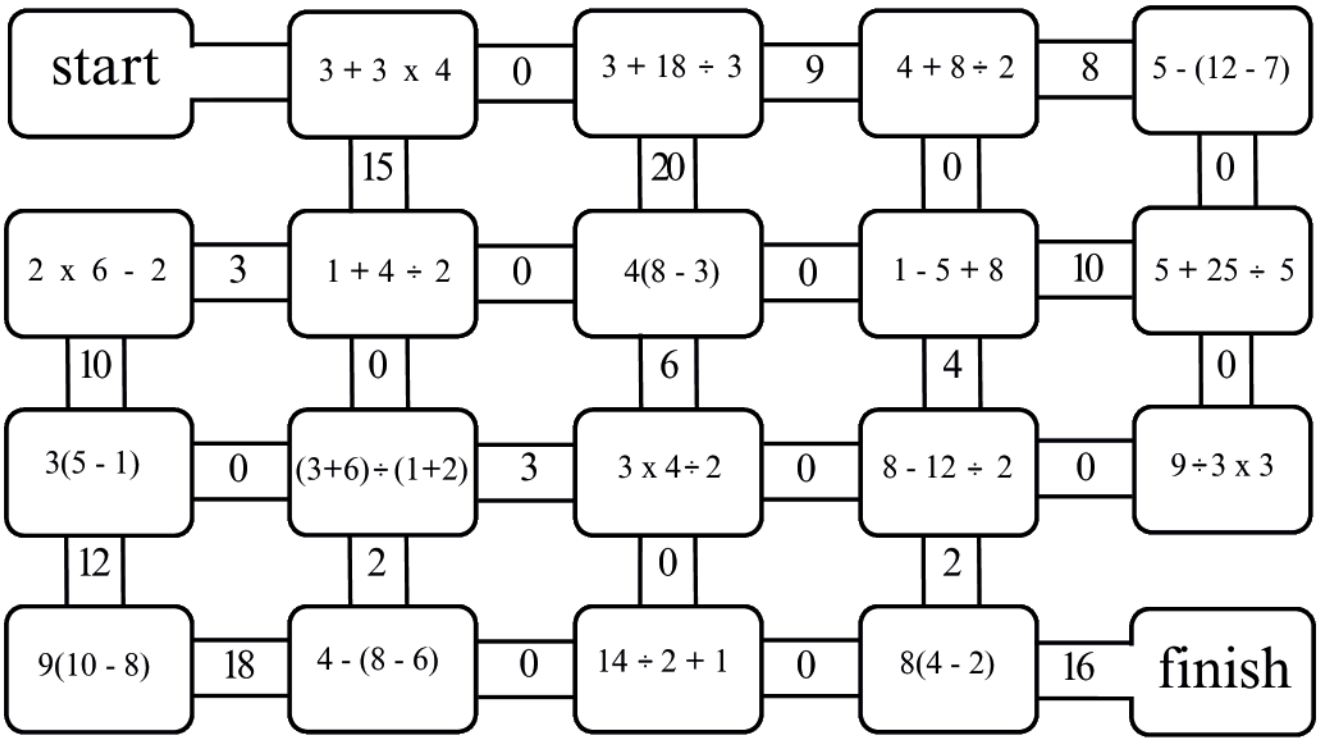
Adding or subtracting by place value (3.8).

add/subtract 3 in the ONES place		add/subtract 3 in the TENS place		add/subtract 3 in the HUNDREDS place	
3 less	3 more	30 less	30 more	300 less	300 more
52, 55, 58		230, 260, 290		198, 498, 798	
____, 106, ____		____, 348, ____		____, 603, ____	
____, 174, ____		____, 239, ____		____, 537, ____	

Fractions LCD ____	$\frac{5}{6}$	$\frac{1}{3}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{9}{12}$
Equivalent Fractions with LCD					
Order fractions least to greatest					

Fractions LCD ____	$\frac{1}{2}$	$\frac{7}{10}$	$\frac{4}{5}$	$\frac{9}{15}$	$\frac{2}{3}$
Equivalent Fractions with LCD					
Order fractions least to greatest					

Choose the correct answer to each problem to find your way through this maze. (3.83)

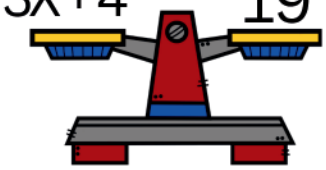


#31 Date _____

Solve for x: (get x by itself!)

UNDO everything that has been done to the X

$3X+4=19$



$3X+4=19$

$-4 \quad -4$

$\frac{3X}{3} = \frac{15}{3}$

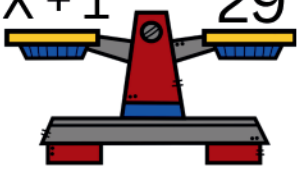
$X = 5$

Check your answer by replacing X with the solution.

$3(5)+4=19$ is this correct?

UNDO everything that has been done to the X

$7X+1=29$



$7X+1=29$

$-1 \quad -1$

$\frac{7X}{7} = \frac{28}{7}$

$X =$

Check your answer.

$7(X)+1=29$ is this correct?

Solve these fun algebra puzzles for x: show your work beneath each problem, then check your answers by substituting the value of x you found for the x in the original equation.

$2X + 6 = 20$

$-6 \quad -6$

$\frac{2X}{2} = \frac{14}{2}$

$X = 7$

✔ $2X + 6 = 20$ true!

$12 + 5X = 27$

✔ $12 + 5X = 27$

$X(7 + 2) = 72$

✔ $X(7 + 2) = 72$

$8X - 20 = 52$

✔ $8X - 20 = 52$

$X(10 - 5) = 40$

✔ $X(10 - 5) = 40$

$25 + 5X = 50$

✔ $25 + 5X = 50$

Find the sums and differences. Remember to simplify. (3.20)

$\frac{5}{6} + \frac{1}{4} = \frac{13}{12} = 1\frac{1}{12}$

$\frac{1}{3} + \frac{3}{5} =$

$\frac{1}{2} + \frac{1}{4} =$

$\frac{1}{2} + \frac{2}{3} =$

$\frac{2}{5} + \frac{1}{5} =$

$\frac{1}{4} + \frac{3}{8} =$

$\frac{1}{7} + 1 =$

$\frac{5}{9} + \frac{1}{3} =$

$3 - \frac{2}{3} =$

$\frac{3}{4} - \frac{1}{8} =$

$\frac{1}{2} - \frac{1}{3} =$

$1 - \frac{1}{4} =$

$\frac{1}{2} - \frac{1}{3} =$

$\frac{2}{3} - \frac{1}{5} =$

$\frac{7}{8} - \frac{3}{4} =$

$1 - \frac{3}{5} =$

Fill in the blanks to complete each chart. (4.28)

	x 10	x 100	x 1000
23	230	2300	
6			
12			

	x 20	x 200	x 2000
23			
6			
12			

Find the missing factors. (4.28)

23 x 100 = 2300 ___ x 10 = 230 23 x _____ = 23000

11 x ____ = 220 11 x ____ = 22000 ___ x 200 = 2200

____ x 10 = 140 ____ x 1000 = 14000 14 x ____ = 1400

34 x ____ = 6800 _____ x 20 = 680 34 x ____ = 68000

Draw lines to match each English phrase with it's math translation.

x reduced by 34	34 + x
34 plus x	x + 25
x fewer than 34	25 - x
x subtracted from 25	x + 21
the sum of x and 25	34 - x
21 added to x	x - 34
x less than 21	x + 51
51 greater than x	21 - x

Find the products and quotients. Always simplify! (4.22)

simplify BEFORE multiplying

$\frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$ $\frac{2}{5} \times \frac{3}{4} =$ $\frac{3}{4} \times \frac{4}{5} =$ $\frac{1}{3} \times 2 =$

Never divide by a fraction, instead multiply by the reciprocal.

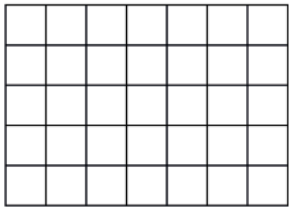
Simplify BEFORE multiplying. How many times will the second fraction fit inside the first fraction?

$\frac{3}{4} * \frac{1}{4} = \frac{3}{1} = 3$ $\frac{3}{5} \div \frac{3}{4} =$ $\frac{5}{6} \div \frac{1}{5} =$ $\frac{2}{3} \div \frac{1}{3} =$

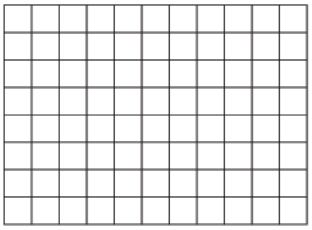
#32 Date _____

In arrays, rows are horizontal and columns are vertical. We name an array by the number of rows it has and then the number of columns it has.

3 row x 4 column = 12 product

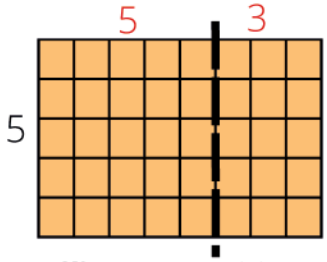


5 row x 7 column = 35 product



____ row x ____ column = ____ product

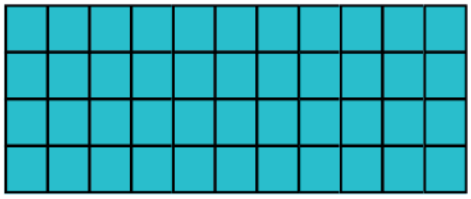
Draw a line to cut each rectangle into parts, then finish the number sentences.



5 row x 8 column = 40 area

(5 x 5)=25 (5 x 3)=15

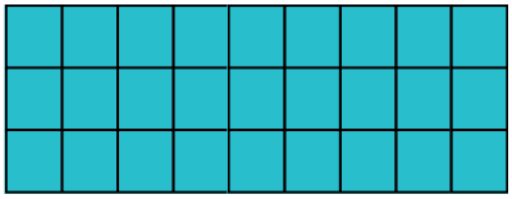
(5 x 5) + (5 x 3) = _____



4 row x ____ column = ____ area

(4 x 5)=____ (4 x 6)=____

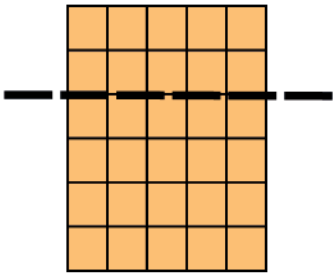
(4 x 5) + (4 x 6) = _____



____ row x 3 column = ____ area

(3 x 2)=____ (3 x 7)=____

(3 x 2) + (3 x 7) = _____



6 row x 5 column = ____ area

(2 x 5)=____ (4 x 5)=____

(2 x 5) + (4 x 5) = _____

WORD PROBLEMS

What number times three is equal to six more than seven times three?

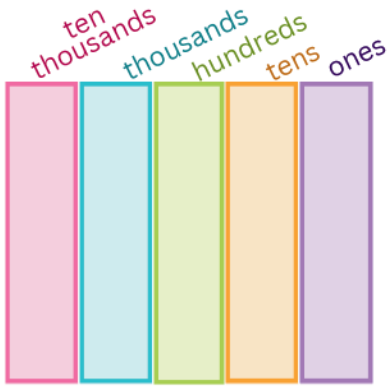
The square root of forty-nine is how much less than five squared?

Solve these fun algebra puzzles for x. (4.31) show your work beneath each problem and check your answers.

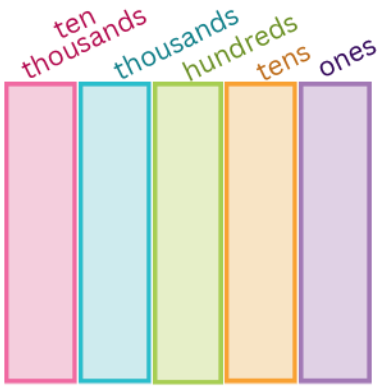
3X - 17 = 1 X(4 - 1) = 33 X(3 + 4) = 56

8 + 12X = 44 X(10 - 4) = 72 7X - 12 = 37

(4.28)



8 x 1 =
8 x 10 =
8 x 100 =
8 x 1000 =



8 x 5 =
8 x 50 =
8 x 500 =
8 x 5000 =

7 x 10 = _____ 7 x 100 = _____ 7 x 1000 = _____
7 x 60 = _____ 7 x 600 = _____ 7 x 6000 = _____

2 x 10 = _____ 2 x 100 = _____ 2 x 1000 = _____
2 x 20 = _____ 2 x 200 = _____ 2 x 2000 = _____

4 x 10 = _____ 4 x 100 = _____ 4 x 1000 = _____
4 x 20 = _____ 4 x 200 = _____ 4 x 2000 = _____

Fill in the blanks to complete each chart. (4.28)

	x 10	x 100	x 1000
15			
8			
21			

	x 30	x 300	x 3000
15			
8			
21			

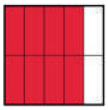
#34 Date _____

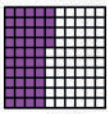
Identify each shaded part using a fraction, a decimal and words.

$\frac{7}{10}$

0.7

seven tenths

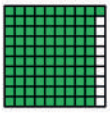


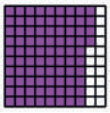


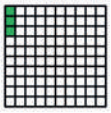
$\frac{44}{100}$

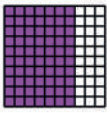
0.44

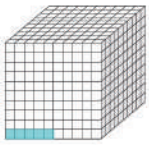
forty-four hundredths







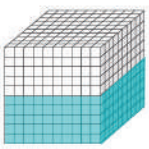


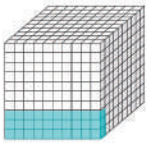


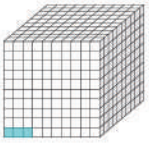
$\frac{5}{1000}$

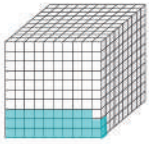
0.005

five thousandths









Draw lines to match the decimals and fractions.

0.5	0.03	0. 05	0.01	0.005	0.3	0.1	0.003	0.001
$\frac{1}{10}$	$\frac{5}{10}$	$\frac{1}{1000}$	$\frac{3}{10}$	$\frac{5}{1000}$	$\frac{3}{1000}$	$\frac{1}{100}$	$\frac{5}{100}$	$\frac{3}{100}$

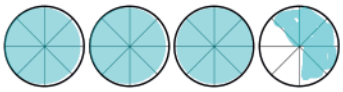
10 pounds of grapes cost $12.47. What is the cost per pound?

1 dozen muffins costs $9.99. What is the cost per muffin?

Use comparison symbols (<, >, =) to compare these decimal numbers. (2.2)

0.002 ◯ 0.2	0.04 ◯ 0.4	0.6 ◯ 0.6
0.5 ◯ 0.05	0.09 ◯ 0.09	0.07 ◯ 0.007
0.03 ◯ 0.003	0.001 ◯ 0.01	0.8 ◯ 0.008

Draw and shade circles to find each improper fraction. (4.25)

$3\frac{5}{8} = \frac{29}{8}$ 	$2\frac{4}{5} = \frac{14}{5}$ 	$4\frac{1}{3} =$ 
$1\frac{9}{12} =$	$3\frac{3}{4} =$	$2\frac{5}{8} =$
$4\frac{7}{10} =$	$2\frac{1}{2} =$	$3\frac{5}{6} =$

Write operators (x, +, -) in all of the empty squares to make each number sentence true. Remember to apply the Order of Operations, PEMDAS. (3.83)

2	×	3		3	=	18
11		0		3	=	3
7		8		2	=	3
=		=		=		=
6		3		2	=	9

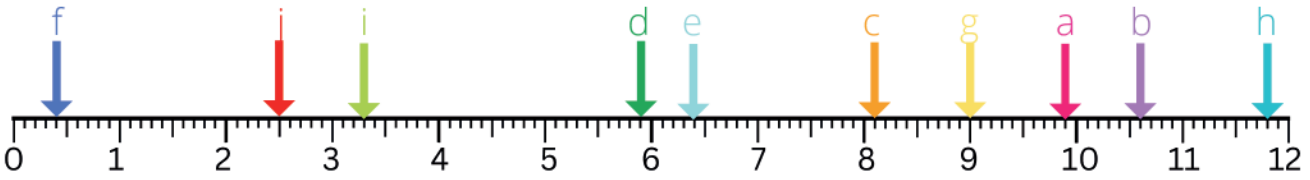
1	+	5		2	=	11
2		0		2	=	2
2		4		5	=	3
=		=		=		=
5		5		20	=	5

#35 Date _____

To which decimal number does each arrow point?

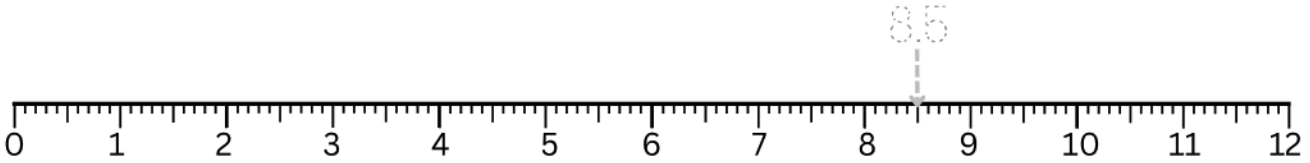
a _____ c _____ e _____ g _____ i _____

b _____ d _____ f _____ h _____ j _____

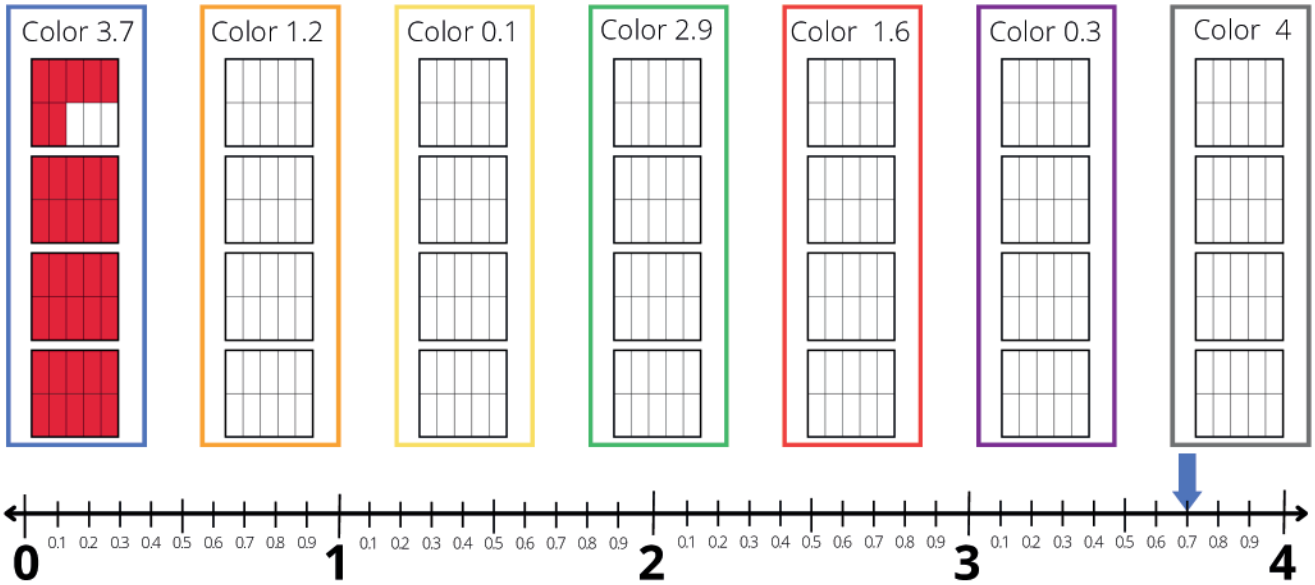


Draw arrows to each decimal number and label them with the number.

~~8.5~~	4.9	0.7	6.8	2.1
1.2	10.3	7.4	11.6	5.3



Color the decimal number in each colored rectangle. Then draw an arrow that color pointing to the number on the number line below.

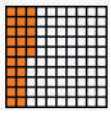


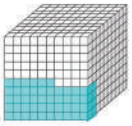
Identify each shaded part using a fraction, a decimal and words. (4.34)

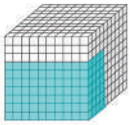
$\frac{9}{10}$

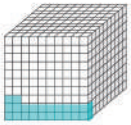
0.9

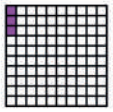
nine tenths

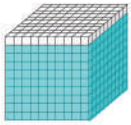


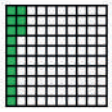






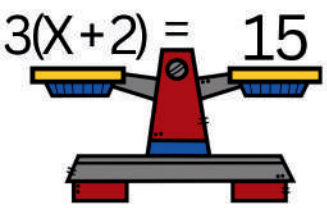






Solve for x (get x alone). (4.31) Show your work beneath each problem, then check your answers.

UNDO everything that has been done to the X



$3(X+2) = 15$

$3(X+2) = 15$ distribute the 3 through the parentheses.

$3X + 6 = 15$

$-6 \quad -6$

$\frac{3X}{3} = \frac{9}{3}$

$X = 3$

Check your answer by replacing X with the solution.

$3(3+2) = 15$ is this correct?

$5(2 + X) = 40$

$3 + 5X = 28$

$2X - 4 = 12$

$X(8 - 4) = 28$

$8X = 56$

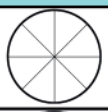
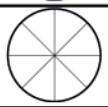
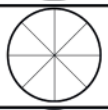
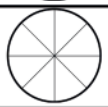
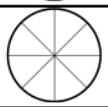
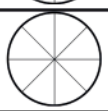
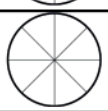
$X - 11 = 25$

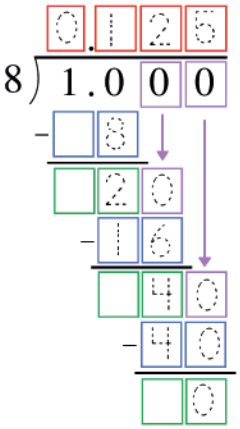
$2(X - 7) = 6$

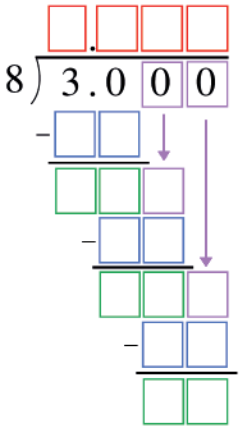
$3 + 9X = 30$

#36 Date _____

Color the fraction circles and find decimals and percents to match each fraction in the chart.

Visual Fraction	Numerical Fraction	Decimal
	$\frac{1}{8}$	
	$\frac{1}{4}$	
	$\frac{3}{8}$	
	$\frac{1}{2}$	
	$\frac{5}{8}$	
	$\frac{3}{4}$	
	$\frac{7}{8}$	
	$\frac{8}{8}$	



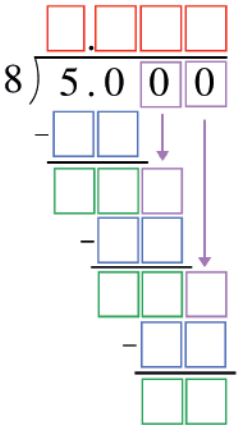


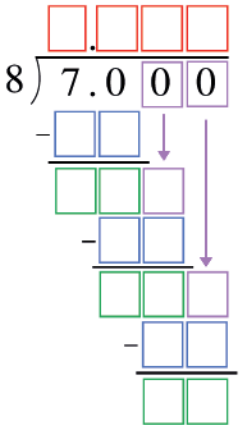
1x10=10 2x?=10

$\frac{1}{2} = \frac{}{10}$

1x100=100 4x?=100

$\frac{1}{4} = \frac{}{100}$

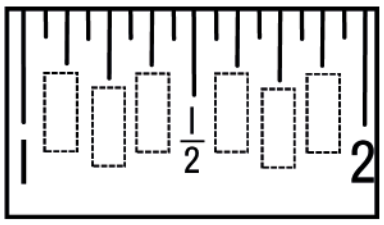




3x100=300 4x?=300

$\frac{3}{4} = \frac{}{100}$

Add the missing fractions to this section of ruler.



Find the products and quotients. Always simplify! (3.22)

simplify BEFORE multiplying

$\frac{3}{9} \times \frac{1}{3} = \frac{1}{9}$ $\quad \frac{5}{6} \times \frac{2}{3} =$ $\quad \frac{2}{5} \times \frac{1}{2} =$ $\quad \frac{1}{5} \times 5 =$

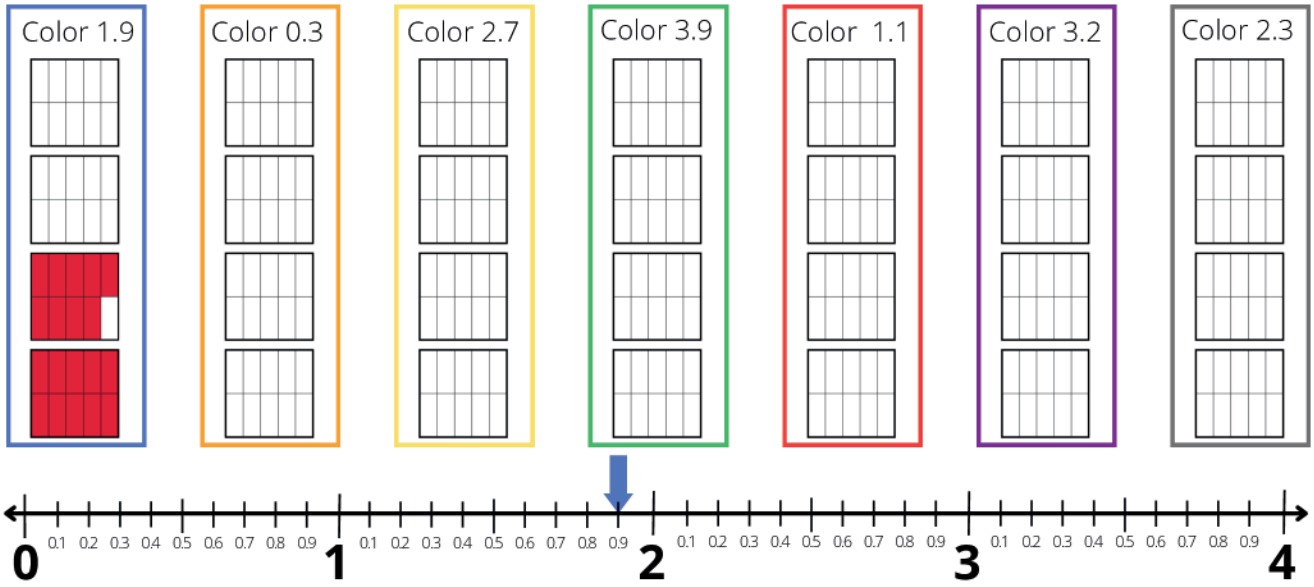
$\frac{1}{2} \times \frac{1}{3} =$ $\quad \frac{2}{4} \times \frac{1}{3} =$ $\quad 3 \times \frac{1}{5} =$ $\quad \frac{1}{3} \times \frac{3}{4} =$

Never divide by a fraction, instead multiply by the reciprocal.

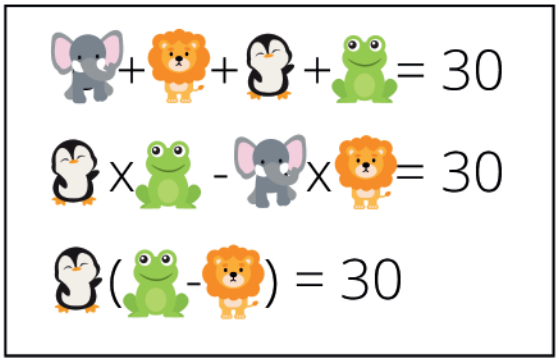
Simplify BEFORE multiplying, if you can. How many times will the second fraction fit inside the first fraction?

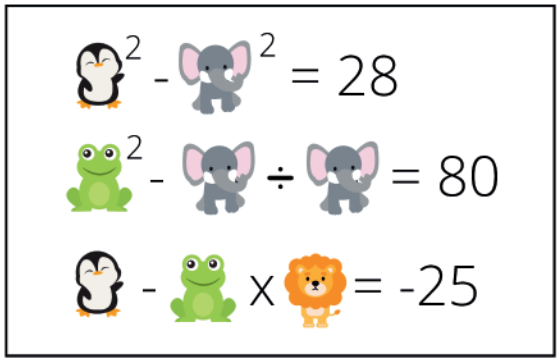
$\frac{5}{6} * \frac{2}{3}\frac{3}{2} = \frac{15}{12} = 1\frac{1}{4}$ $\quad \frac{4}{5} \div \frac{1}{4} =$ $\quad \frac{5}{7} \div \frac{5}{8} =$ $\quad \frac{5}{6} \div \frac{1}{6} =$

Color the decimal number in each colored rectangle. Then draw an arrow that color pointing to the number on the number line below. (4.35)



Each group contains two truths and a lie. Circle the LIE in each group. Follow the order of operations. (PEMDAS) (3.83)





Fill in the blanks to complete each chart. (4.28)

	x 10	x 100	x 1000
9			
4			
13			

	x 40	x 400	x 4000
9			
4			
13			

#37 Date _____

Use your place value chart to help you write the mixed numbers as decimals.

$1\frac{1}{10}$ = 1.1 $4\frac{38}{100}$ = 4.38 $6\frac{1}{1000}$ = 6.001

$5\frac{9}{10}$ = _____ $2\frac{3}{10}$ = _____ $4\frac{4}{100}$ = _____

$7\frac{78}{100}$ = _____ $2\frac{52}{1000}$ = _____ $3\frac{2}{10}$ = _____

$9\frac{4}{10}$ = _____ $4\frac{19}{100}$ = _____ $8\frac{6}{10}$ = _____

$3\frac{725}{1000}$ = _____ $2\frac{52}{100}$ = _____ $1\frac{2}{1000}$ = _____

Convert these mixed numbers to decimals. Rename the fractional part with a denominator of ten or one hundred.

$3\frac{1}{2}$ = 3.5 1x10=10 2x?=10 $\frac{1}{2} = \frac{?}{10}$ $1\frac{1}{3}$ = $2\frac{3}{8}$ =

$2\frac{3}{4}$ = $4\frac{1}{4}$ = $1\frac{2}{5}$ =

$4\frac{5}{8}$ = $3\frac{3}{5}$ = $5\frac{2}{3}$ =

Write each decimal as a fraction with a denominator of ten.

2.1 = $2\frac{1}{10}$ 1.3 = _____ 4.4 = _____

1.7 = _____ 3.5 = _____ 2.9 = _____

Solve using the Order of Operations (PEMDAS). (3.83)

$3 - 6 \div 3 =$ _____

$2 + 3 \times 3 =$ _____

$4(1 + 3) =$ _____

$8 \div \sqrt{16} =$ _____

$6^2 \div 9 =$ _____

$5 - 14 \div 7 =$ _____

$8 + (6 - 5) =$ _____

$9 \times 5 \div 3^2 =$ _____

Draw circles to group the items, then complete the equations. (4.16)

$\frac{20}{2} =$ $20 \div 2 =$ $2\overline{)20}$ What is 1/2 of 20?

$\frac{20}{4} =$ $20 \div 4 =$ $4\overline{)20}$ What is 1/4 of 20?

$\frac{20}{5} =$ $20 \div 5 =$ $5\overline{)20}$ What is 1/5 of 20?

WORD PROBLEMS

quantity means parentheses (9 + 3)

What is twice the quantity of nine and three?

What is one fifth of forty?

Find the missing fractional addends to make each number sentence true. (4.20)

$\frac{1}{6} + \frac{1}{3} = \frac{1}{2}$ (1/6 + 2/6 = 3/6)

$\frac{2}{3} + \square = \frac{3}{3} = 1$

$\frac{1}{2} + \square = \frac{3}{4}$ (2/4)

$\square + \frac{1}{5} = \frac{4}{5}$

$\frac{1}{4} + \square = \frac{5}{8}$

$\frac{2}{5} + \square = 1\frac{5}{5}$

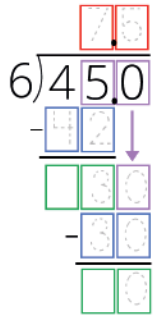
$\frac{3}{12} + \square = \frac{1}{2}$

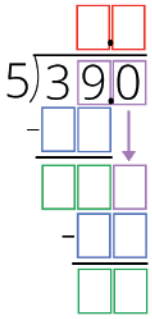
$\square + \frac{1}{6} = \frac{3}{4}$

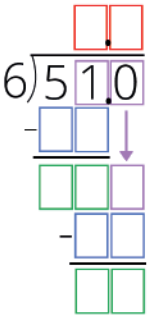
$\square + \frac{1}{4} = \frac{3}{8}$

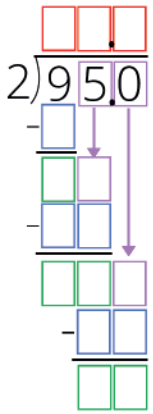
#38 Date _____

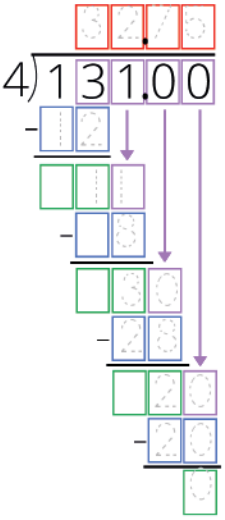
Find the quotients.

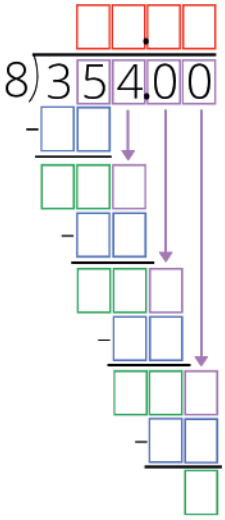


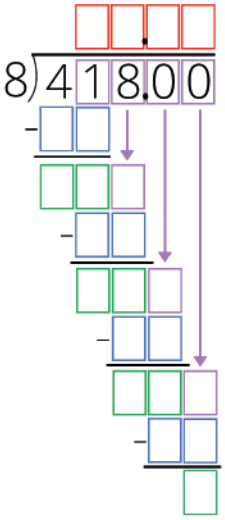


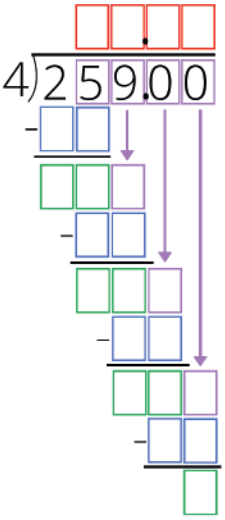


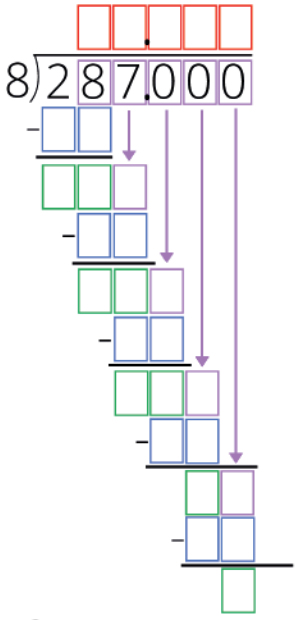


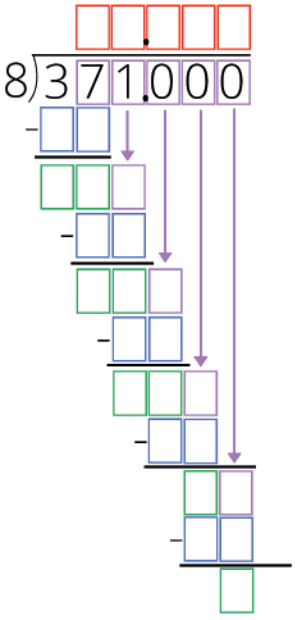


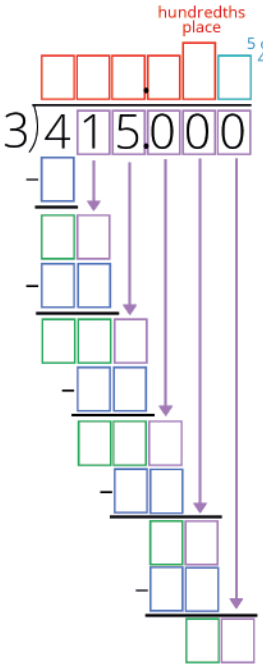


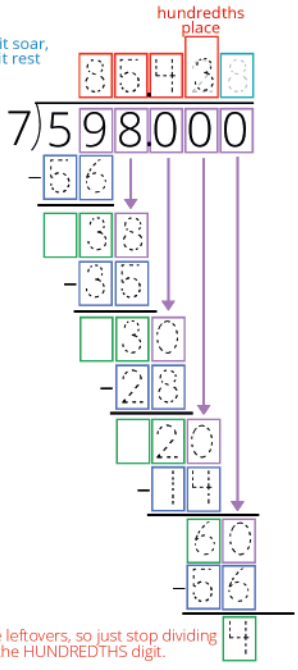












Write these mixed numbers as decimals. (4.37)

$1\frac{8}{10} =$ 1.8 $3\frac{27}{100} =$ _____ $2\frac{3}{10} =$ _____

$3\frac{4}{10} =$ _____ $3\frac{4}{1000} =$ _____ $3\frac{4}{100} =$ _____

$2\frac{3}{5} =$ _____ $4\frac{1}{4} =$ _____ $1\frac{2}{3} =$ _____

Write each decimal as a fraction with a denominator of ten. (4.37)

$1.9 =$ _____ $2.8 =$ _____ $3.5 =$ _____

$3.2 =$ _____ $1.4 =$ _____ $2.7 =$ _____

How much change will you receive if you pay for each item with $1.00? Write each amount using a cent sign then a dollar sign. (3.18)

_____¢ _____ _____

$_____ _____ _____

Convert these mixed numbers to decimals. Rename the fractional part with a denominator of ten or one hundred. (4.37)

$1\frac{1}{4} =$ 1.25 $\frac{1}{4} = \frac{25}{100}$ (1x100=100, 4x?=100) $3\frac{4}{5} =$ $\frac{4}{5} = \frac{8}{10}$ (4x10=40, 5x?=40) $1\frac{3}{5} =$

$5\frac{3}{10} =$ $1\frac{8}{9} =$ $4\frac{7}{9} =$

$7\frac{1}{6} =$ $2\frac{5}{9} =$ $3\frac{5}{6} =$

#39 Date _____

Re-write and stack the numbers, lining up the decimal points. Solve.

7.55 - 3.7 = 3.85

$$\begin{array}{r} 7.55 \\ -3.70 \\ \hline 3.85 \end{array}$$

1.92 - 1.12 = _____

3.2 + 1.37 = _____

4.14 + 2.5 = _____

1.83 + 2.1 = _____

5.18 - 1.7 = _____

1.01 + 1.8 = _____

2.82 - 1 = _____

1.56 + 6.9 = _____

2.57 - 2.03 = _____

4.3 - 2.01 = _____

1.71 + 0.23 = _____

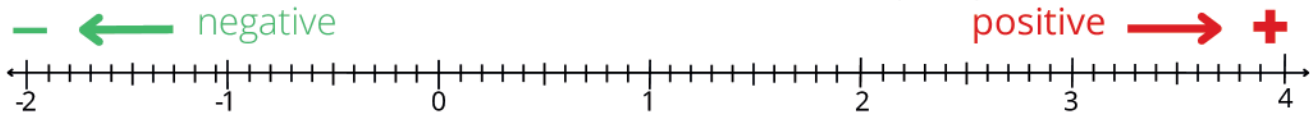
Let's have a bake sale! Find the cost following ingredients:

flour	$3.40
sugar	$3.97
butter	$4.98
eggs	$3.86
chocolate chips	$3.79

This recipe makes ONE HUNDRED cookies! What is the cost per cookie?

If we sell each cookie for one dollar and we sell all of them, how much profit will we make? (profit = total sales minus cost of ingredients)

Use the number line to find each sum or difference. (3.58)



3.1 - 4 = ____

4 - 3.1 = ____

1.5 - 0.5 = ____

0.5 - 1.5 = ____

2 - 2.3 = ____

2.3 - 2 = ____

-2 + 2.3 = ____

-2 + 0.3 = ____

Find the products. (3.66)

50 x 4 =
7 x 4 = _____
add products

$$\begin{array}{r} 57 \\ \times\ 4 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ \times\ 8 \\ \hline \end{array}$$

$$\begin{array}{r} 43 \\ \times\ 5 \\ \hline \end{array}$$

$$\begin{array}{r} 39 \\ \times\ 2 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ \times\ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 35 \\ \times\ 4 \\ \hline \end{array}$$

315 x 2 =
300 x 2 =
10 x 2 =
5 x 2 = _____
add products

$$\begin{array}{r} 315 \\ \times\ \ 2 \\ \hline \end{array}$$

$$\begin{array}{r} 317 \\ \times\ \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 423 \\ \times\ \ 2 \\ \hline \end{array}$$

$$\begin{array}{r} 206 \\ \times\ \ 4 \\ \hline \end{array}$$

$$\begin{array}{r} 4632 \\ \times\ \ \ 2 \\ \hline \end{array}$$

$$\begin{array}{r} 2873 \\ \times\ \ \ 6 \\ \hline \end{array}$$

$$\begin{array}{r} 1568 \\ \times\ \ \ 4 \\ \hline \end{array}$$

$$\begin{array}{r} 2151 \\ \times\ \ \ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 3154 \\ \times\ \ \ 3 \\ \hline \end{array}$$

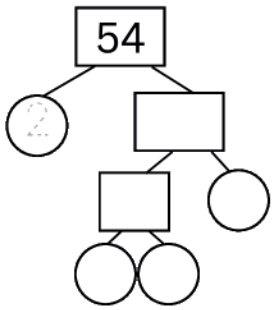
$$\begin{array}{r} 1272 \\ \times\ \ \ 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3187 \\ \times\ \ \ 7 \\ \hline \end{array}$$

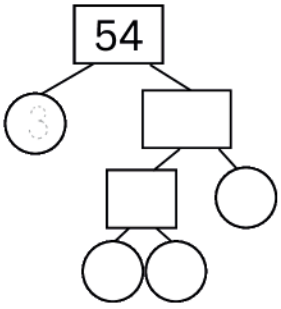
$$\begin{array}{r} 2465 \\ \times\ \ \ 5 \\ \hline \end{array}$$

List the **factors** of 54: 1, _____, _____, _____, _____, _____, _____, 54

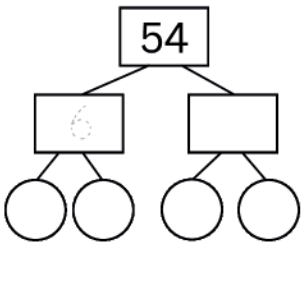
Factor the number in the top box of each factor tree. The composite numbers go in the rectangles and the prime numbers go in the circles. (3.65)



prime factorization:
2×3^3



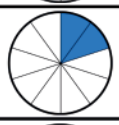
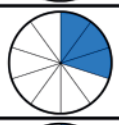
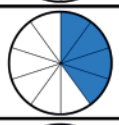
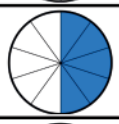
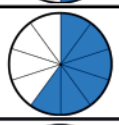
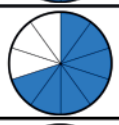
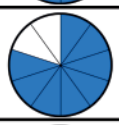
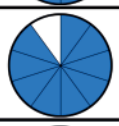
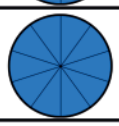
prime factorization:



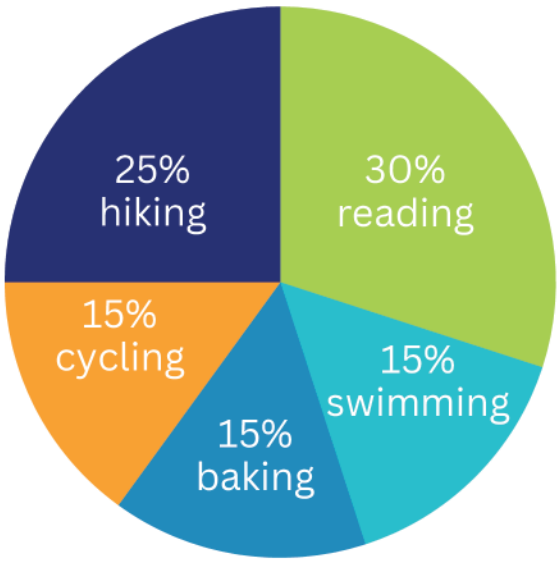
prime factorization:

#40 Date _____

Complete this table.

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{10}$	0.1	10%
			
			
			
			
			
			
			
			
			

A survey was conducted to determine the preferred activity of a group of people. These were the results.



If 100 people voted, how many voted for each activity:

swimming _____

reading _____

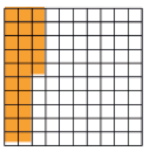
hiking _____

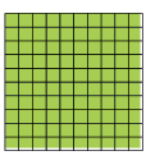
Which three activities tied? _____

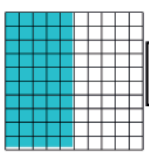
_____

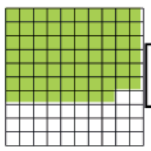
How many more people voted for reading than swimming?

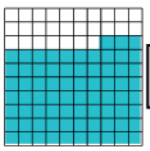
Each block has 100 squares. Write each percentage and each fraction with a denominator of 100 (Per CENT).

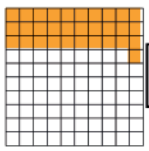

25% = $\frac{25}{100}$

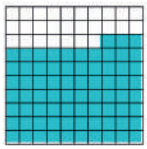

% = $\frac{\square}{100}$


% = $\frac{\square}{100}$

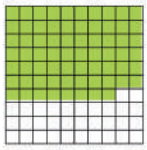

% = $\frac{\square}{\square}$


% = $\frac{\square}{\square}$


% = $\frac{\square}{\square}$

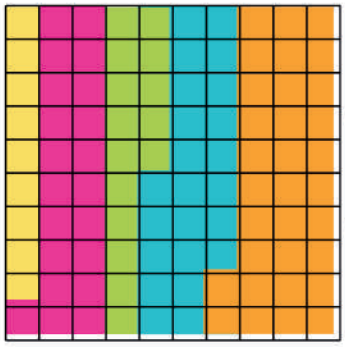


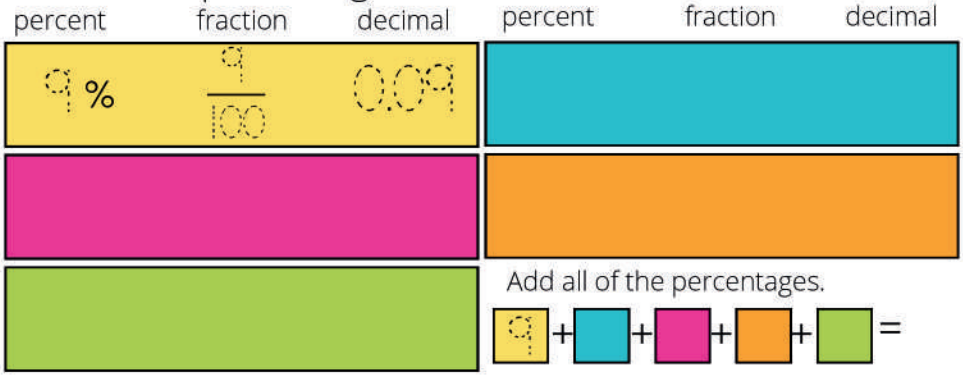
What percent is shaded? _____
What percent is not shaded?_____
Find the sum of those percentages. _____



What percent is shaded? _____
What percent is not shaded?_____
Find the sum of those percentages. _____

This grid has 100 squares. What percentage is each color?





Why do the percentages of each color all add up to 100%? _____

_____

Do percentages always add up to 100%? _____

Find the missing fractional addends to make each number sentence true. (4.20)

$\frac{1}{2} + \frac{2}{4} = \frac{3}{4}$ $\quad \square + \frac{1}{5} = \frac{4}{5}$ $\quad \frac{1}{3} + \square = \frac{3}{3} = 1$ $\quad \square + \frac{1}{3} = \frac{3}{6}$

$\square + \frac{1}{6} = \frac{1}{2}$ $\quad \square + \frac{3}{5} = \frac{9}{10}$ $\quad \frac{1}{12} + \square = \frac{3}{4}$ $\quad \frac{3}{6} + \square = \frac{11}{12}$

$\frac{3}{12} + \square = \frac{1}{2}$ $\quad \square + \frac{3}{10} = \frac{4}{5}$ $\quad \frac{2}{5} + \square = \frac{5}{5} = 1$ $\quad \square + \frac{1}{4} = \frac{7}{8}$

#41 Date _____

Find the quotients.

1x10=10 5x?=10

$\frac{1}{5} = \frac{?}{10}$

2x10=20 5x?=20

$\frac{2}{5} = \frac{}{10}$

3x10=30 5x?=30

$\frac{3}{5} = \frac{}{10}$

4x10=40 5x?=40

$\frac{4}{5} = \frac{}{10}$

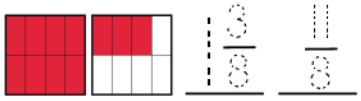
Complete the table.

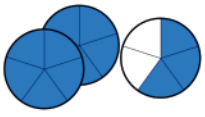
Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{5}$	0.20	20%
			
			
			
			

What is the place value of the 7 in each of these numbers? Write it as a fraction or a whole number. Use your place value chart if you need to.

1.74 $\frac{7}{10}$	72.5	3.007
7.14	57.03	719.2
16.27	4.527	7,856,302

Name these fractions as mixed numbers and improper fractions. (4.25)


$\frac{3}{8}$ $\frac{11}{8}$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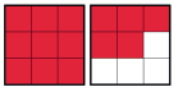
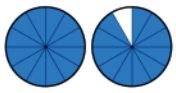
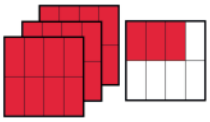
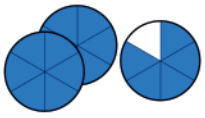

____ ____


____ ____


____ ____


____ ____

Convert these improper fractions to mixed numbers. (4.25)

$\frac{13}{8} = 1\frac{5}{8}$ $\frac{10}{4} =$ $\frac{15}{2} =$ $\frac{17}{5} =$

$\frac{11}{6} =$ $\frac{25}{8} =$ $\frac{9}{7} =$ $\frac{13}{3} =$

Find the lowest common denominator (LCD) of each group of fractions. Then RENAME each fraction using the LCD. Then order the fractions from the least to the greatest. (4.19)

Fractions LCD ____	$\frac{1}{2}$	$\frac{5}{6}$	$\frac{5}{9}$	$\frac{2}{3}$	$\frac{9}{12}$
Equivalent Fractions with LCD					
Order fractions least to greatest					

Fractions LCD ____	$\frac{7}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	$\frac{13}{16}$	$\frac{1}{2}$
Equivalent Fractions with LCD					
Order fractions least to greatest					

of = times

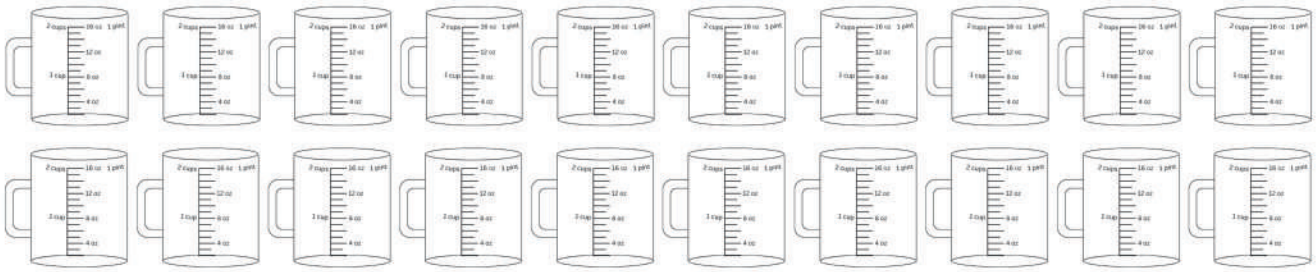
How much is 1/5 of 25? $\frac{1}{5} \times 25$

How much is 3/5 of 25?

How much is 1/6 of 42?

How much is 5/6 of 42?

You have two gallons of juice. Use a crayon to "fill" as many of these containers as you can before you run out of juice. Use all of the juice. (3.21)



What fraction of the containers did you "fill"?

What decimal is that fraction? (find the equivalent fraction with a denominator of ten)

number of containers filled →

$$\frac{\quad}{20} = \frac{\quad}{10}$$

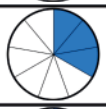
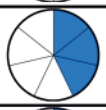
You earned $95.50 washing windows and $123.50 babysitting. How much did you earn altogether?

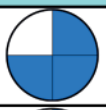
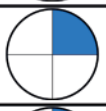
After you earned that money, you took your two sisters to a movie. Each ticket was $7.50. How much did you pay for three tickets?

How much money do you have left?

#42 Date _____

Find the fractions, decimals and percents to complete these charts. Round the decimals to the nearest hundredth. Round the percents to the nearest whole number.

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{2}{9}$	0.22	22%
			
			
			
			
			

Visual Fraction	Numerical Fraction	Decimal	Percent
			
			
			
			
			
			

Is the denominator a factor of 10 or 100?

Yes

1x10=10 2x?=10

$\frac{1}{2} = \frac{}{10}$

1x10=10 5x?=10

$\frac{1}{5} = \frac{}{10}$

1x100=100 4x?=100

$\frac{1}{4} = \frac{}{100}$

3x100=300 4x?=300

$\frac{3}{4} = \frac{}{100}$

No

round to the hundredths place.

5 or more let the circled digit soar,
4 or less let the circled digit rest

$9\overline{)2.000}$ $9\overline{)3.000}$ $8\overline{)3.000}$ $7\overline{)3.000}$

$3\overline{)1.000}$ $3\overline{)2.000}$ $6\overline{)5.000}$ $7\overline{)5.000}$

Convert these mixed numbers to improper fractions. (4.25)

$1\frac{1}{8} = \frac{9}{8}$ $1\frac{2}{5} =$ $3\frac{1}{2} =$ $2\frac{3}{4} =$

$3\frac{4}{6} =$ $1\frac{1}{3} =$ $2\frac{5}{7} =$ $1\frac{7}{8} =$

Find the decimal and percent to match each fraction. Color the squares to find the mystery picture.

$\frac{1}{10} = 0.1 = 10\%$ $\frac{1}{2} =$ $\frac{8}{10} =$

$\frac{1}{4} =$ $\frac{3}{4} =$ $\frac{9}{10} =$

0.5	50%	0.5	50%	0.25	0.1	10%	0.1	10%	0.1	25%	0.5	50%	0.5	50%
50%	0.5	25%	10%	0.1	10%	0.1	10%	0.1	10%	0.8	10%	0.25	50%	0.5
50%	0.25	0.1	10%	0.1	10%	0.1	0.1	10%	0.8	90%	80%	0.1	25%	50%
25%	10%	10%	0.9	90%	0.9	0.1	10%	80%	90%	0.9	90%	0.8	0.1	25%
10%	0.1	0.1	10%	0.1	10%	0.1	0.1	10%	0.8	0.9	0.8	0.1	10%	0.1
0.1	10%	75%	0.1	10%	0.1	10%	0.1	10%	0.1	80%	0.1	0.75	0.1	10%
10%	0.1	10%	0.1	10%	0.1	10%	0.1	10%	0.1	10%	0.1	0.1	10%	0.1
25%	10%	0.1	0.9	90%	0.9	90%	0.9	90%	0.9	90%	0.9	10%	0.1	0.25
50%	0.25	10%	0.1	0.9	90%	0.75	75%	0.75	90%	0.9	0.1	10%	25%	50%
0.5	50%	25%	10%	0.1	0.9	75%	0.75	75%	90%	0.1	10%	0.25	0.5	50%
50%	0.5	50%	0.25	10%	0.1	0.75	75%	0.75	0.1	10%	25%	50%	50%	0.5
0.5	50%	0.5	50%	25%	10%	75%	0.75	75%	10%	0.25	0.5	50%	0.5	50%

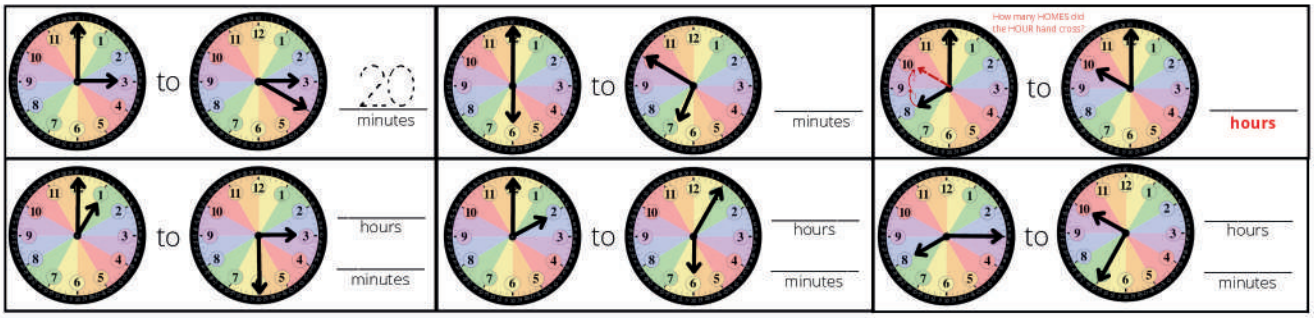
#43 Date _____

1 century = 100 years	1 year = 12 months
1 decade = 10 years	1 week = 7 days
1 common year = 365 days	1 day = 24 hours
1 leap year = 366 days	1 hour = 60 minutes
1 year = 52 weeks	1 minute = 60 seconds

Convert these units of time:

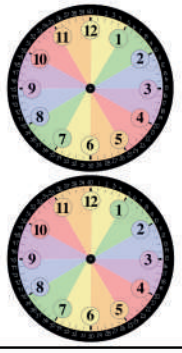
12 months = _____ year	1 hour = _____ minutes	5 years = _____ months
36 months = _____ years	2 hours = _____ seconds	2 common years = _____ days
1 day = _____ hours	48 hours = _____ days	12 hours = _____ day
3 days = _____ hours	1 year = _____ months	2 minutes = _____ seconds
1 year = _____ weeks	7 days = _____ week	1000 years = _____centuries
2 years = _____ weeks	5 weeks = _____ days	5 decades = _____ years

How much time has elapsed between each set of clocks? (4.43)



How much time has elapsed? Draw the start and end times on the clocks. (2.58)

Your flight leaves at 9:10 AM and arrives at 2:30 PM. How long is your flight?

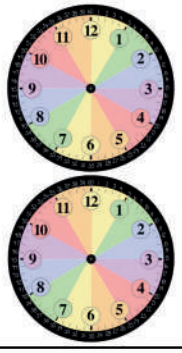


time	hours	minutes
9:10 AM		50
10:00 am	2	
noon	2	
2:00 pm		30
2:30 PM		

1 hour and 20 minutes

5 hour and 20 minutes

The movie starts at 10:30 PM and ends at 1:05 AM. How long is the movie?



time	hours	minutes
10:30 PM		
1:05 AM		

_____ hours and _____ minutes

Complete this chart. Round decimals to the hundredths place and just use whole number percents. (4.41)

Is the denominator a factor of 10 or 100?

Yes use the butterfly method No divide the numerator by the denominator

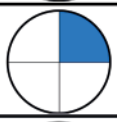
1x10=10 5x?=10 $\frac{1}{5} = \frac{}{10}$

1x10=10 2x?=10 $\frac{1}{2} = \frac{}{10}$

1x100=100 4x?=100 $\frac{1}{4} = \frac{}{100}$

round to the hundredths place. 5 or more let the circled digit soar, 4 or less let the circled digit rest

$8\overline{)1.000}$ $6\overline{)1.000}$ $3\overline{)1.000}$

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{10}$	0.1	10%
			
			
			
			
			
			
			

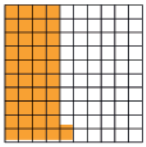
Divide each set into equal halves by drawing lines around groups. Split any leftover in HALF between the two groups. How many are in each group? (2.45)

$3 \div 2 =$ ___

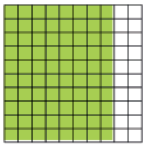
$5 \div 2 =$ ___

$7 \div 2 =$ ___

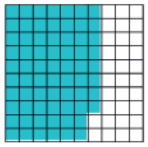
Each block has 100 squares. Color the squares to illustrate each percentage equation and fill in any missing parts of each equation. (4.40)



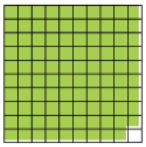
___ % = $\frac{\text{___}}{100}$



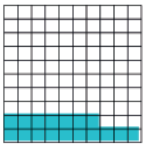
= ___



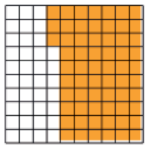
= ___



= ___



= ___



= ___

#44 Date _____

How much money is this? Write each amount in cents, then in dollars.





_____¢ _____¢ _____¢ _____¢ _____¢

$_____ $_____ $_____ $_____ $_____

Plot each number on the number line, then round to the nearest TEN. (4.11)

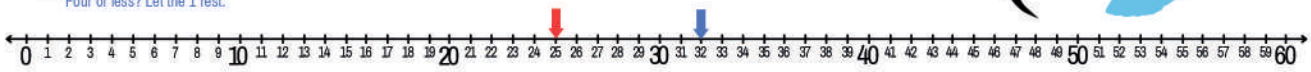
Rounding to the nearest ten? Circle the TENS place, then underline the number in the ONES place.

25 ____ Five or more? Let the 1 soar (round up to 2).

32 ____ Four or less? Let the 1 rest.

17 _____ 8 _____

44 _____ 55 _____



Round to the nearest HUNDRED:

Rounding to the nearest hundred? Circle the HUNDREDS place, then underline the number in the TENS place.

150 ____ Five or more? Let the 6 soar (round up to 7).

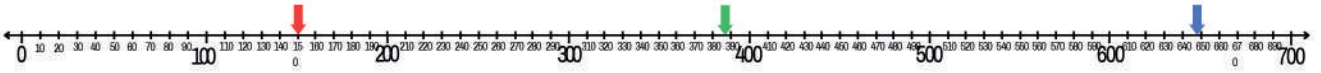
649 ____ Four or less? Let the 1 rest.

387 ____ Five or more? Let the 2 soar (round UP to 3).

125 _____ 475 _____ 551_____

399 _____ 333 _____ 549_____

605 _____ 590 _____ 228_____



Round to the nearest THOUSAND:

Rounding to the nearest thousand? Circle the THOUSANDS place, then underline the number in the HUNDREDS place.

if there is no digit, it's a zero

0875 ____ Five or more? Let the 0 soar (round UP to 1).

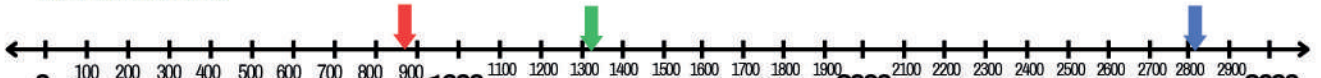
2817 ____ Five or more? Let the 2 soar (round UP to 3).

1315 ____ Four or less? Let the 1 rest.

382 _____ 2939 _____ 213_____

998 _____ 2530 _____ 2812_____

1550 _____ 1344 _____ 1827_____



Complete this chart. Round decimals to the hundredths place and just use whole number percents. (4.41)

Is the denominator a factor of 10 or 100?

Yes use the butterfly method No divide the numerator by the denominator

round to the hundredths place.

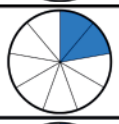
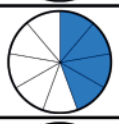
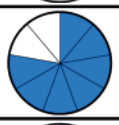
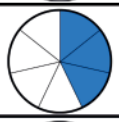
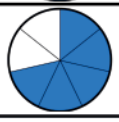
5 or more let the circled digit soar, 4 or less let the circled digit rest

$9\overline{)1.000}$

$9\overline{)2.000}$

$9\overline{)4.000}$

$9\overline{)7.000}$

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{9}$	0.11	11%
			
			
			
			
			
			
			
			

$7\overline{)1.000}$ $7\overline{)2.000}$ $7\overline{)3.000}$ $7\overline{)4.000}$ $7\overline{)5.000}$

of = times

How much is 1/6 of 36? $\frac{1}{6} \times 36$

How much is 5/6 of 36?

How much is 1/6 of 48?

How much is 5/6 of 48?

#45 Date _____

Use the menu prices to add up the cost of each meal. Find each customer's change if they pay with a $10.00 bill. Line up the decimals!

FOOD TRUCK MENU

Hamburger	$3.69
Hot dog	$1.50
Pizza	$2.80
French Fries	$1.75
Salad	$1.25
Apple Slices	$1.88
Soda	$1.75
Ice cream	$2.79

3.69		10.00	
1.75			
+ 1.75		---	
---		---	

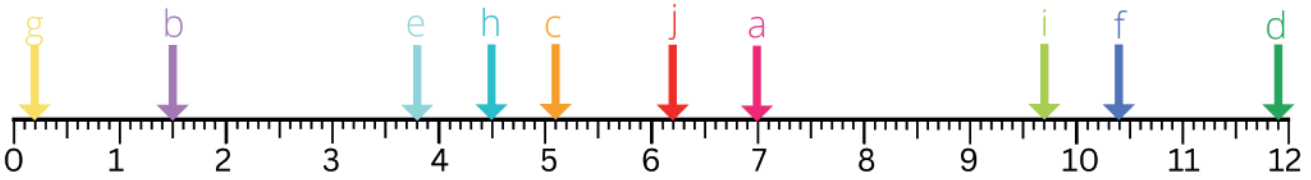
What number does x represent in each equation? (4.31)

$10 - 2X = 4$	$X =$ ___	$X + 3 = 10$	$X =$ ___
$5 + X = 12$	$X =$ ___	$10 - X = 6$	$X =$ ___
$9X = 72$	$X =$ ___	$2X - 1 = 19$	$X =$ ___
$25 - 2X = 5$	$X =$ ___	$6X + 2 = 50$	$X =$ ___
$X + X = 12$	$X =$ ___	$14 - X = 6$	$X =$ ___

To which decimal number does each arrow point? (4.35)

a _____ c _____ e _____ g _____ i _____

b _____ d _____ f _____ h _____ j _____

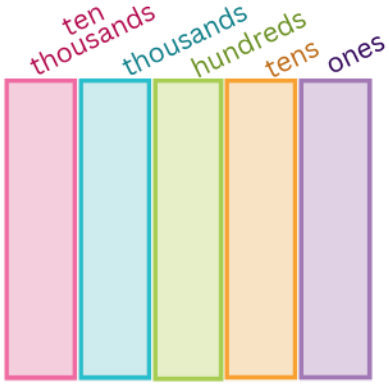


6 x 1 =

6 x 10 =

6 x 100 =

6 x 1000 =

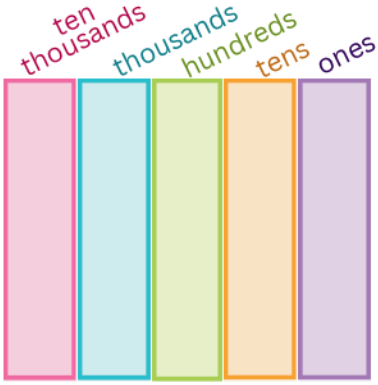


6 x 2 =

6 x 20 =

6 x 200 =

6 x 2000 =



Draw lines to match the decimals and fractions. (4.34)

0.5 0.03 0. 05 0.01 0.005 0.3 0.1 0.003 0.001

$\frac{1}{10}$ $\frac{5}{10}$ $\frac{1}{1000}$ $\frac{3}{10}$ $\frac{5}{1000}$ $\frac{3}{1000}$ $\frac{1}{100}$ $\frac{5}{100}$ $\frac{3}{100}$

Let's make banana bread!
10 pounds of bananas cost $5.50. What did they cost per pound?

1 dozen eggs costs $4.20. What is the cost per egg?

#46 Date _____

This book is $12.00 and sales tax is 10%. What is the total price?

price $12.00 + sales tax 10% OF $12.00 $1.20 = total price

If you pay with a $20 bill, what is your change?

This sweater is $39.00. Sales tax is 10%. What is the total price?

price + sales tax 10% OF $39.00 = total price

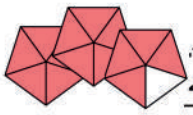
If you pay with a $100 bill, what is your change?

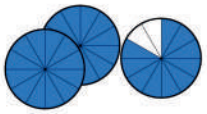
This laptop is $395.00 and sales tax is 10%. What is the total price?

price + sales tax 10% OF $395.00 = total price

If your parents spend $200 each week on groceries, how much do they spend each year? 	If you make a new scrapbook every year for a decade, how many scrapbooks do you have? 
If your grandma is exactly half a century old this year, what year was she born? 	If you drink a gallon of milk every week, how many gallons do you drink each year? 

Name these fractions as mixed numbers and improper fractions. (4.25)


$2\frac{4}{6}$ $\frac{14}{6}$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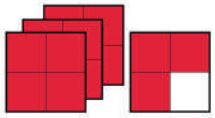
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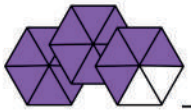
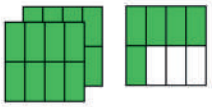
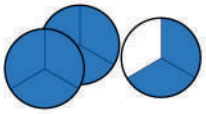

___ ___


___ ___


___ ___

Convert these improper fractions to mixed numbers. (4.25)

$\frac{25}{6} = 4\frac{1}{6}$ $\frac{13}{9} =$ $\frac{15}{2} =$ $\frac{12}{3} =$

$\frac{23}{7} =$ $\frac{19}{6} =$ $\frac{14}{4} =$ $\frac{17}{5} =$

Find the sums and differences. Simplify. (4.20)

$\frac{2}{3}^{10} + \frac{3}{5}^{9} = \frac{19}{15} = 1\frac{4}{15}$ $\frac{3}{4}^{9} - \frac{1}{3}^{4} =$ $\frac{1}{2} + \frac{2}{3} =$ $\frac{5}{6} - \frac{1}{2} =$

$\frac{2}{3} - \frac{4}{9} =$ $\frac{1}{4} + \frac{1}{5} =$ $1 - \frac{1}{4} =$ $\frac{1}{4} + \frac{1}{3} =$

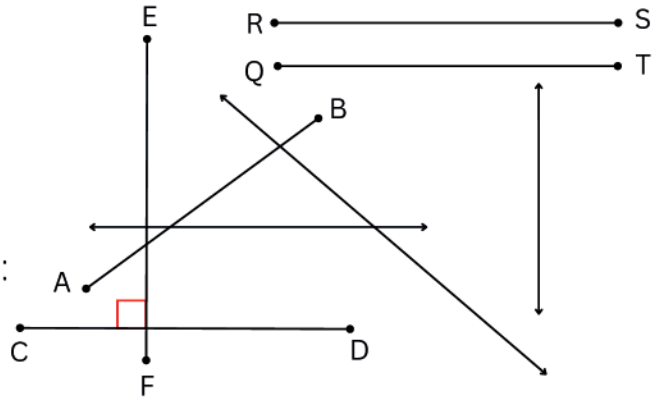
Find the sum or difference of these mixed numbers. (4.26)

$1\frac{1}{3} + 4\frac{1}{6}$ $5\frac{3}{4} + 1\frac{1}{3}$ $2\frac{3}{8} + 2\frac{3}{4}$ $4\frac{1}{4} + 3\frac{1}{4}$ $3\frac{2}{3} + 5\frac{1}{2}$

$3\frac{2}{3} - 2\frac{1}{3}$ $4\frac{5}{6} - 1\frac{2}{3}$ $2\frac{3}{4} - 2\frac{1}{4}$ $3\frac{1}{2} - 1\frac{3}{4}$ $2\frac{2}{3} - 1\frac{1}{2}$

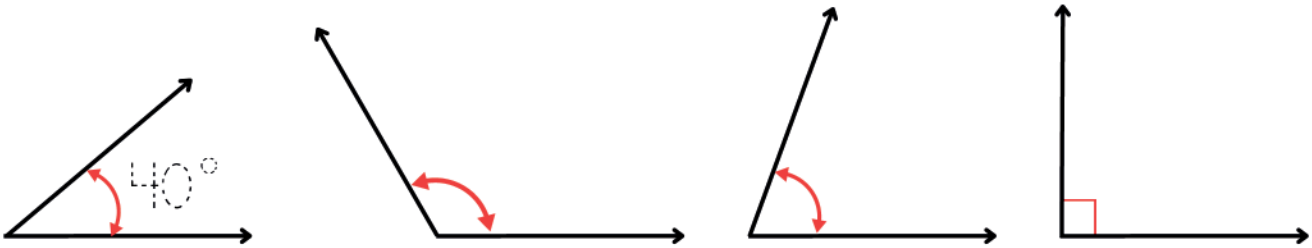
#48 Date _____

1. Trace line segment $\overline{AB}$ orange.
2. Trace the oblique LINE red.
3. Trace the horizontal LINE green.
4. Trace the vertical LINE yellow.
5. Name the two perpendicular line segments:_____ and _____
6. Name the two parallel line segments: _____ and _____



What angle do clock hands pointing to 3:00 make?

Use your protractor to measure each angle. Use units (degree).



Draw:

Right Angle (include the small square)

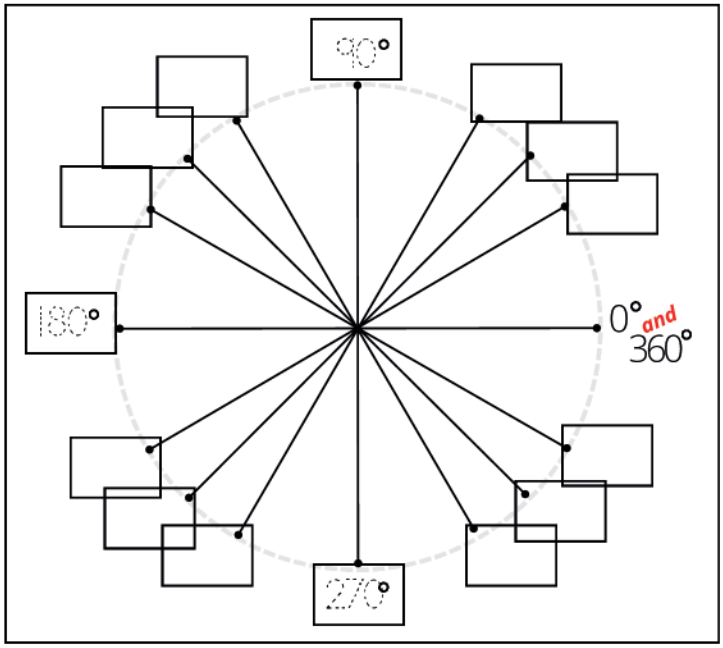
Acute Angle

Straight Angle

Obtuse Angle

Reflex Angle

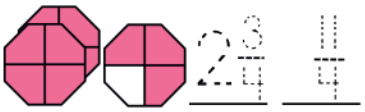
Fill in the boxes around this circle with the correct angle measurements. Use your reference pages if you need to.

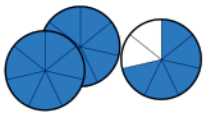


What number does x represent in each equation? (4.31)

15 - 3X = 15	X = ___	10 - X = 4	X = ___
5 + X = 10	X = ___	10X = 20	X = ___
2X = 10	X = ___	20X = 60	X = ___
1 + X = 10	X = ___	5X + 2 = 27	X = ___

Name these fractions as mixed numbers and improper fractions. (4.25)





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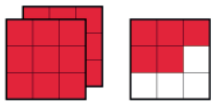
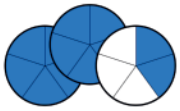
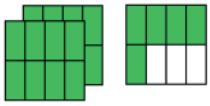


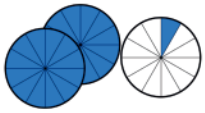
___ ___



___ ___

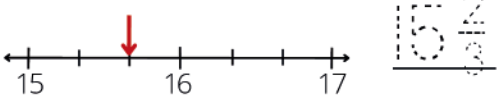


___ ___

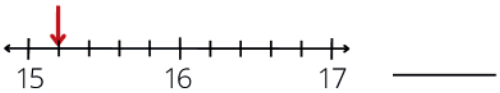


___ ___

To which **mixed number** does each arrow point? (4.24)



15 2/3



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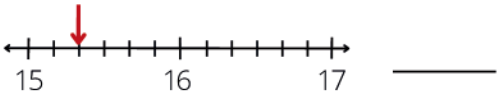

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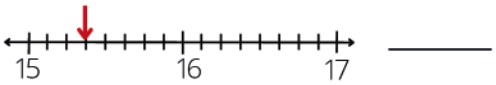
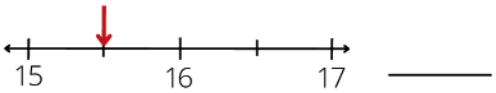


___



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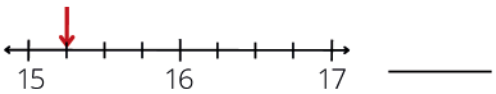
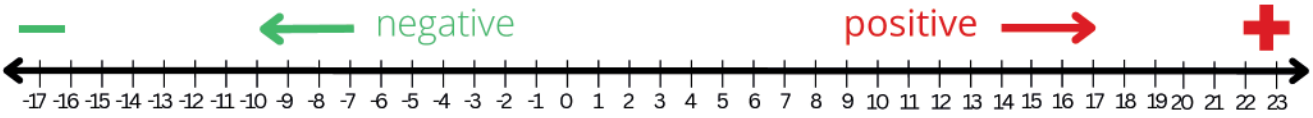


___

Use the number line to find each sum or difference. (3.58)



2 - 9 = -7	-5 + 5 = ___	8 - 12 = ___
9 - 2 = ___	5 - 5 = ___	14 - 11 = ___
-2 - 9 = ___	-5 - 5 = ___	- 7 + 18 = ___

#49 Date _____

Measure a side of each polygon with a ruler to find the side length. Use units!

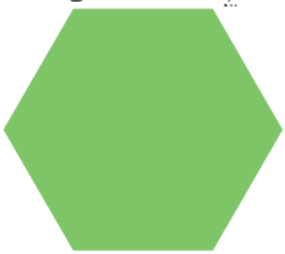
name: triangle
number of sides: 3
side length: 1 1/2 in.

units are inches

two names

names: _____
number of sides: _____
side length: _____

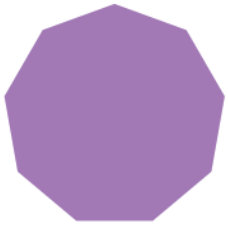
name: _____
number of sides: _____
side length: _____



name: _____
number of sides: _____
side length: _____

name: _____
number of sides: _____
side length: _____

name: _____
number of sides: _____
side length: _____



name: _____
number of sides: _____
side length: _____

name: _____
number of sides: _____
side length: _____

Polygons with four sides have two names:

_____

_____

Write each **quadrilateral** term twice. (1.65) Match each term to its properties.

trapezoid

square

parallelogram

rectangle

rhombus

- Has two pairs of parallel sides, right angles and congruent sides.
- Has two pairs parallel sides, and four right angles.
- Has only one pair of parallel sides.
- A parallelogram with four congruent sides, but it does not have to have 4 right angles.
- Has 2 pairs of parallel sides, opposite each other.

Complete this chart. Round decimals to the hundredths place and just use whole number percents. (4.41)

Is the denominator a factor of 10 or 100?

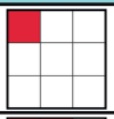
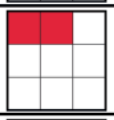
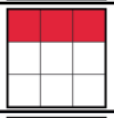
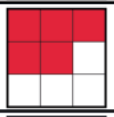
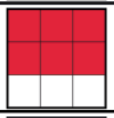
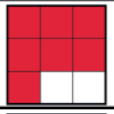
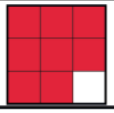
Yes use the butterfly method No divide the numerator by the denominator

round to the hundredths place

5 or more let the circled digit soar, 4 or less let the circled digit rest

$9\overline{)1.000}$ $9\overline{)2.000}$ $9\overline{)3.000}$

$9\overline{)5.000}$ $9\overline{)6.000}$ $9\overline{)7.000}$ $9\overline{)8.000}$

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{9}$	0.11	11%
			
			
			
			
			
			

Draw a HORIZONTAL line and a VERTICAL line to divide this square into FOURTHS.

Use two OBLIQUE lines to divide this square into FOURTHS.

Draw 3 HORIZONTAL lines to divide this square into FOURTHS.

Draw 3 VERTICAL lines to divide this square into FOURTHS.

Use the time conversion table in your reference pages to convert these units of time. (4.43)

2 centuries = _____ years

5 decades = _____ years

3 days = _____ hours

3 hours = _____ minutes

1/2 day = _____ hours

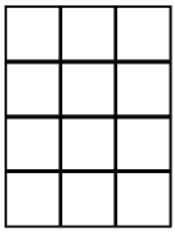
10 minutes = _____ seconds

6 months = _____ year

730 days = _____ years

30 minutes = _____ hour

#50 Date _____



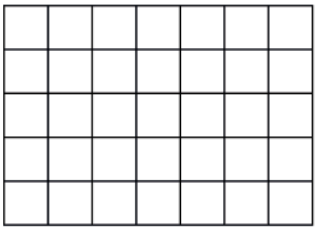
width _____

length _____

perimeter _____ units

area _____ units^2

what? why?



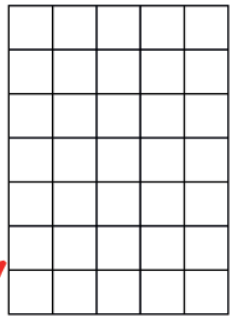
width _____

length _____

is this the Commutative Property of Multiplication?

perimeter _____ units

area _____ units^2

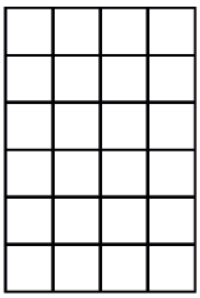


width _____

length _____

perimeter _____ units

area _____ units^2

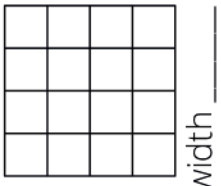


width _____

length _____

perimeter _____ units

area _____ units^2



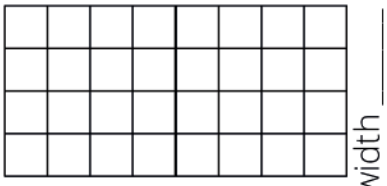
width _____

length _____

_____ (length) x _____ (width) = _____ (area)

perimeter _____ units

area _____ units^2



width _____

length _____

_____ (length) x _____ (width) = _____ (area)

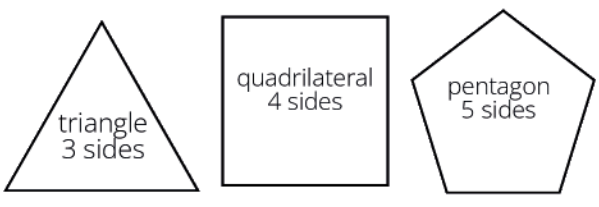
perimeter _____ units

area _____ units^2

Draw lines to match each quadrilateral to it's most specific name. (1.65)

rectangle square parallelogram rhombus trapezoid

Draw least 3 more polygons to complete this pattern. You may draw REGULAR or IRREGULAR polygons. Label each polygon with its name. (4.49)



Find the sums and differences. Remember to simplify! (4.20)

$\frac{1}{2} + \frac{3}{4} = \frac{5}{4} = 1\frac{1}{4}$ $\frac{1}{3} + \frac{3}{4} =$ $\frac{5}{6} - \frac{2}{3} =$ $\frac{4}{5} - \frac{1}{2} =$ $\frac{1}{8} + \frac{1}{4} =$

Stack the numbers, lining up the decimal points. Find the sum or difference. (4.39)

9.73 + 4.8 = 14.53

8.01 - 1.12 = _____

$$\begin{array}{r} 9.73 \\ +4.80 \\ \hline 14.53 \end{array}$$

7.3 + 8.78 = _____

15.02 - 1 = _____

Do you prefer to work with fractions or decimals?

Why?

What angle do clock hands pointing to 9:00 make?

Solve using the Order of Operations (PEMDAS). (3.83)

$3(7 + 1) =$ _____

$6^2 - \sqrt{49} =$ _____

$2(5 + 3) =$ _____

$2 + 25 \div 5 =$ _____

$8 - (56 \div 7) =$ _____

$3^3 \div 9 =$ _____

$9 + 18 \div 6 =$ _____

$12 \div 2 - 2^2 =$ _____

$\sqrt{16} - 3 \times 2 =$ _____

$8(4 + 3) =$ _____

Find the products. (3.61)

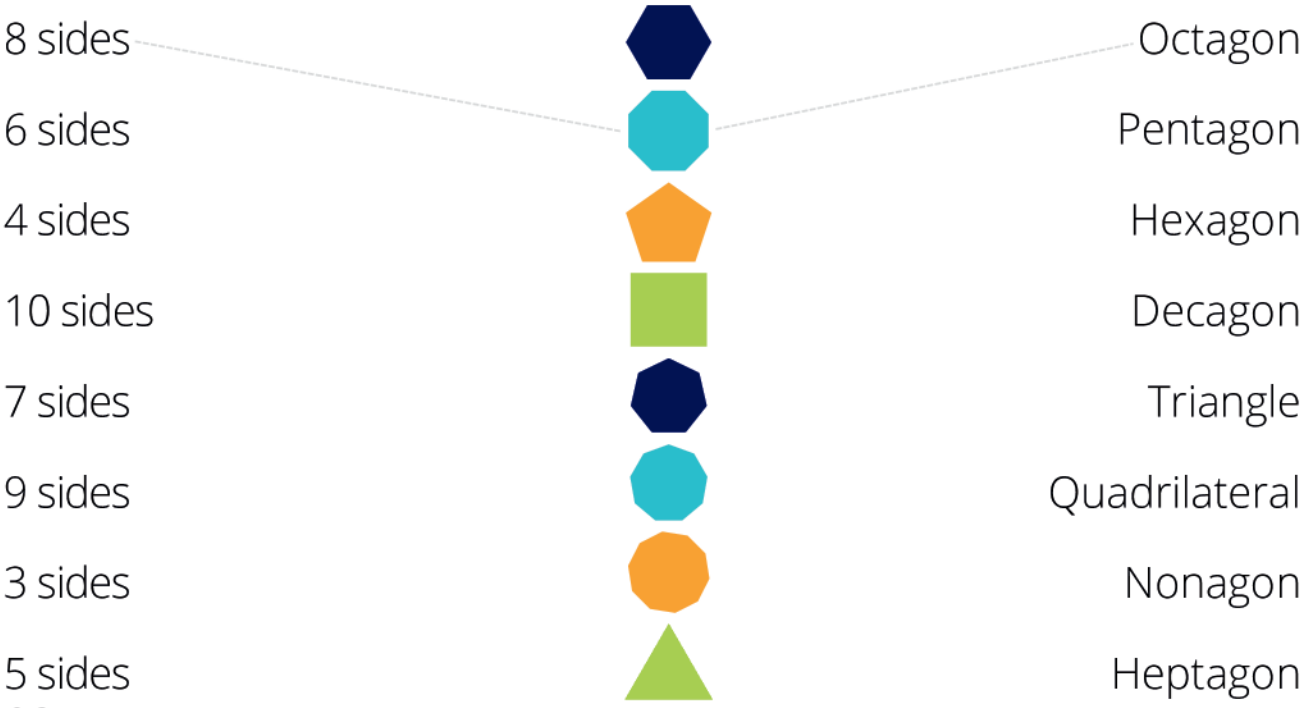
$$\begin{array}{r} 32 \\ \times\ 3 \\ \hline \end{array} \quad \begin{array}{r} 24 \\ \times\ 2 \\ \hline \end{array} \quad \begin{array}{r} 19 \\ \times\ 4 \\ \hline \end{array} \quad \begin{array}{r} 47 \\ \times\ 3 \\ \hline \end{array} \quad \begin{array}{r} 315 \\ \times\ 2 \\ \hline \end{array} \quad \begin{array}{r} 257 \\ \times\ 4 \\ \hline \end{array} \quad \begin{array}{r} 118 \\ \times\ 3 \\ \hline \end{array}$$

$$\begin{array}{r} 1320 \\ \times\ 2 \\ \hline \end{array} \quad \begin{array}{r} 3237 \\ \times\ 5 \\ \hline \end{array} \quad \begin{array}{r} 1531 \\ \times\ 4 \\ \hline \end{array} \quad \begin{array}{r} 3421 \\ \times\ 3 \\ \hline \end{array} \quad \begin{array}{r} 2114 \\ \times\ 2 \\ \hline \end{array}$$

#51 Date _____

Word Form (use commas)	Standard Form
One billion, eight million, five thousand, two hundred	1,008,005,200
	81,302,007
	14,000,050,901
	901,012,011
Three hundred ten billion, twenty-two million, fifty thousand, one hundred	
Nineteen billion, three million, nine hundred	
	55,001,018
One billion, four million, five thousand, nine hundred fifty-three	
One hundred eight billion, eight	
	12,203,015

Draw lines to match the polygons across all three columns. (4.49)

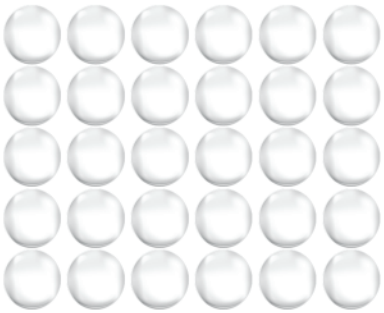


Divide the marbles into FIVE equal groups and color each a different color. (4.16)

$\frac{30}{5}=$ $30\div 5=$ $5\overline{)30}$

What is 1/5 of 30?
What is 2/5 of 30?
What is 3/5 of 30?
What is 4/5 of 30?
What is 5/5 of 30?

Divide the marbles into SIX equal groups and color each a different color.



$\frac{30}{6}=$ $30\div 6=$ $6\overline{)30}$

What is 1/6 of 30?
What is 2/6 of 30?
What is 3/6 of 30?
What is 4/6 of 30?
What is 5/6 of 30?

Which fraction is 50% of the marbles?

Use a ruler to draw these line segments and angles. (4.48)

$\overline{AB}$	$\overline{uP}$	$\overline{bd}$	$\overline{em}$	$\overline{mH}$	$\overline{Ma}$	$\overline{Yo}$	$\angle AZC$
$\overline{CD}$	$\overline{fh}$	$\overline{EV}$	$\overline{LH}$	$\overline{MR}$	$\overline{XY}$	$\overline{pr}$	$\angle UQF$
$\overline{OG}$	$\overline{gi}$	$\overline{KS}$	$\overline{Ke}$	$\overline{cT}$	$\overline{lo}$		$\angle pNt$

A C Q O u G f g E K S M a X l p t

b d e m c T

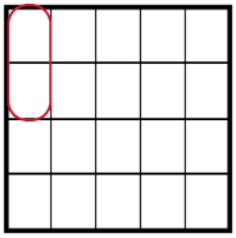
B Z D U F P h i V L H R Y o r N

Solve. Remember of means times. (of = x)

What is 50% of 28? $\frac{50}{100}\times 28=\frac{28}{2}=14$
What is 50% of 36?
What is 50% of 12?
What is 50% of 44?
What is 50% of 50?

What is 10% of 20? $\frac{10}{100}\times 20=\frac{20}{10}=2$
What is 20% of 20?
What is 50% of 20?
What is 60% of 20?
What is 100% of 20?

This square has twenty pieces. Divide it into TENTHS.



#52 Date _____

$$\begin{array}{r} 30 \\ \times\ 40 \\ \hline 1200 \end{array}$$ two zeros

$$\begin{array}{r} 300 \\ \times\ 400 \\ \hline 120000 \end{array}$$ four zeros

$$\begin{array}{r} \$7.00 \\ \times\ 40 \\ \hline \$280.00 \end{array}$$ three zeros, two behind a decimal

You can multiply big numbers in your head? You must be a genius!

Multiply mentally.

20 x 70	30 x 30	50 x 60	90 x 20	40 x 40	80 x 50
400 x 60	700 x 30	200 x 80	700 x 200	200 x 300	800 x 400

You earn $5.00 each time you walk your neighbors dogs. If you walk them every day in April, how much money did you make? (solve mentally)

If you walk them every day in May, how much money did you make?

If it takes you twenty-five minutes to walk the dogs and you start at 8:30 am, what time will you be finished?

WORD PROBLEMS

What is seven squared minus the quantity of three squared plus one?

Ten, twice, is how much less than five squared?

Trace the existing numbers, fill in the missing numbers and color the squares with EVEN numbers yellow. (3.1)

9,996						10,002			

Find the sums and differences. Remember to simplify! (4.20)

$\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$ $\quad \frac{3}{4} - \frac{1}{8} =$ $\quad \frac{1}{5} + \frac{2}{3} =$ $\quad \frac{7}{8} - \frac{1}{2} =$ $\quad \frac{1}{3} + \frac{1}{4} =$

Find the products. Multiply fractions straight across. Always simplify! (4.22)

simplify BEFORE multiplying

$\frac{5}{8} \times \frac{1}{5} = \frac{1}{8}$ $\quad \frac{1}{3} \times 2 =$ $\quad \frac{2}{3} \times \frac{1}{2} =$ $\quad 4 \times \frac{1}{4} =$

$\frac{1}{2} \times \frac{1}{2} =$ $\quad \frac{1}{3} \times \frac{3}{4} =$ $\quad \frac{3}{4} \times \frac{2}{3} =$ $\quad \frac{1}{4} \times \frac{4}{5} =$

Find the quotients. Always simplify! (4.23)

Never divide by a fraction, instead multiply by the reciprocal.

Simplify BEFORE multiplying, if you can. How many times will the second fraction fit inside the first fraction?

$\frac{1}{2} * \frac{3}{1} = \frac{3}{2} = 1\frac{1}{2}$

How many times will 1/3 fit inside 1/2?

$\frac{1}{3} \div \frac{1}{3} =$

How many times will 1/3 fit inside 1/3?

$\frac{3}{4} \div \frac{1}{4} =$

How many times will 1/4 fit inside 3/4?

$\frac{1}{2} \div \frac{1}{4} =$

How many times will 1/4 fit inside 1/2?

$\frac{4}{6} \div \frac{1}{3} =$

How many times will 1/3 fit inside 4/6?

$\frac{1}{4} \div \frac{1}{2} =$

How many times will 1/2 fit inside 1/4?

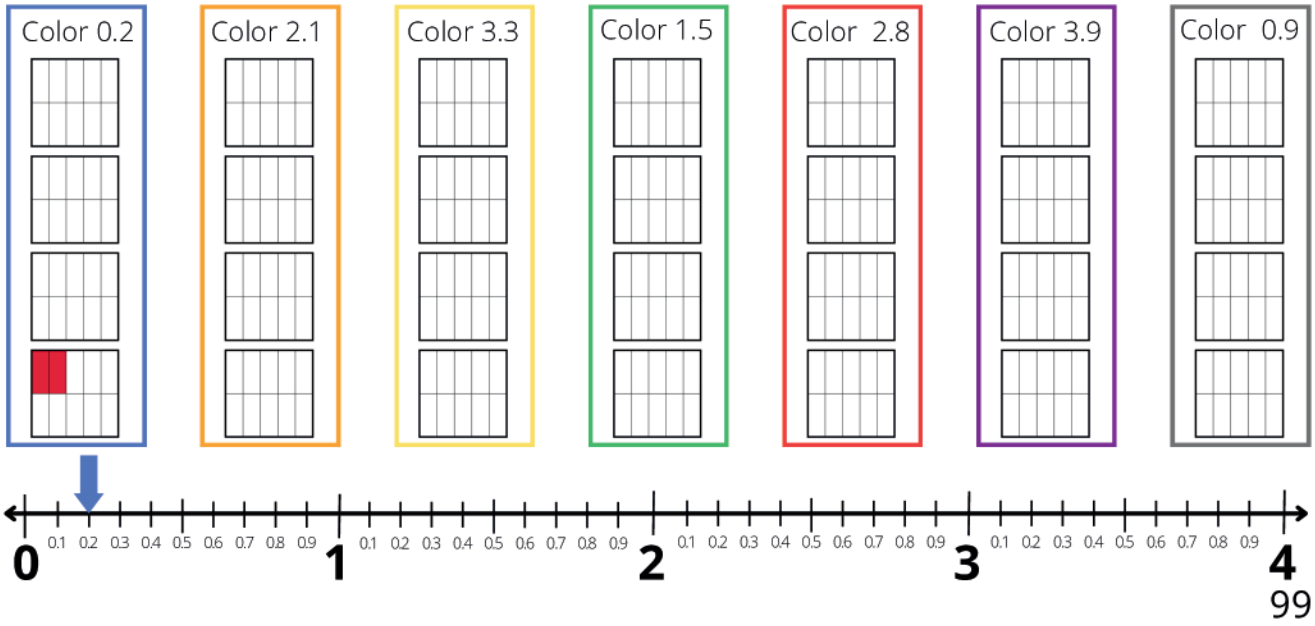
$\frac{1}{2} \div \frac{1}{8} =$

How many times will 1/8 fit inside 1/2?

$\frac{2}{3} \div \frac{1}{6} =$

How many times will 1/6 fit inside 2/3?

Color the decimal number in each colored rectangle. Then draw an arrow that color pointing to the number on the number line below. (4.35)



#53 Date _____

What is the average number of days in the months of the year?

What is the total number of days in the first three months of a leap year?

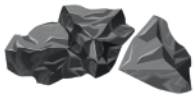
The paint store tracks how much paint each customer buys. The customers on Saturday purchased: 5 gallons, 1 gallon, 5 gallons, 6 gallons and 3 gallons. How many gallons of paint was the average purchase?

When Kate is born, Henry is two-years old and Jack is four times Henry's age. How old are Henry and Jack on Kate's second birthday?

How old will Jack and Henry be when Kate turns 20-years-old?

Three fourths of the one thousand rocks we collected were igneous. How many rocks were igneous? (illustrate the problem)

The rest of the rocks were sedimentary. What percent of the rocks were sedimentary?



Word Form (4.8)	Standard Form
Three hundred nine billion, one million, forty-five	309,001,000,045
Forty-three million, one hundred thousand, seventeen	
	50,018,100,099
Six hundred sixty billion, twelve million, nine thousand one	
	812,005,078,192
Seven hundred sixteen billion, thirty-five million, nine	

Stack the numbers, lining up the decimal points. Find the sum or difference. (4.39)

3.15 - 1.8 = 1.35

$$\begin{array}{r} 3.15 \\ -1.80 \\ \hline 1.35 \end{array}$$

39.03 + 24.12 = _____

5.71 + 3 = _____

25 - 12.02 = _____

Find the products (3.65).

$$\begin{array}{r} 43 \\ \times\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 57 \\ \times\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 89 \\ \times\ 3 \\ \hline \end{array} \qquad \begin{array}{r} 421 \\ \times\ 5 \\ \hline \end{array} \qquad \begin{array}{r} 514 \\ \times\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 385 \\ \times\ 4 \\ \hline \end{array}$$

$$\begin{array}{r} 2013 \\ \times\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 3421 \\ \times\ 5 \\ \hline \end{array} \qquad \begin{array}{r} 5102 \\ \times\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 2832 \\ \times\ 4 \\ \hline \end{array} \qquad \begin{array}{r} 4231 \\ \times\ 3 \\ \hline \end{array}$$

If 3 pies cost $14.67, how much would 5 pies cost?

Your mom bought 5 pounds of apples for $1.59 per pound, 12 oranges for 65 cents each, ketchup for $3.49 and 3 gallons of milk for $3.98 each. What did she spend on groceries?

You made three types of cookies. One batch made 2 dozen cookies. One batch made 18 cookies and one batch made 3 dozen cookies. What was the average number of cookies in each batch?

#54 Date _____

What is the probability of:

Picking a green candy _____

Picking a yellow candy _____

Picking a red candy _____

Picking a purple candy _____

Picking a blue candy _____

Picking either a green or red candy _____

Picking either a green or yellow candy _____

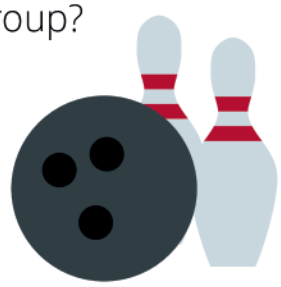
Which candy is least likely to be picked? _____

Which is most likely to be picked? _____

Is it more likely to pick purple or red? _____

You went bowling with 4 friends. You all bowled 3 games. Here are the scores. Find each person's average and complete the table.

What is the average score of all of the bowlers in your group?



Jack and Jill Bowling Game Scores	#1	#2	#3	average
You	175	199	202	
James	189	145	215	
Savannah	133	151	121	
Cortney	124	118	139	
Levi	117	128	124	

Unscramble the Greek prefixes then write the number of sides of a polygon each represents. (4.49)

irt tri three

haex _____

tapen _____

toca _____

anon _____

treat _____

cade _____

thape _____

Complete this chart. Round decimals to the hundredths place and percents to whole numbers. (4.41)

Is the denominator a factor of 10 or 100?

Yes use the butterfly method No divide the numerator by the denominator

1x10=10 5x?=10

$\frac{1}{5} = \frac{?}{10}$

2x10=20 5x?=20

$\frac{2}{5} = \frac{?}{10}$

1x10=10 2x?=10

$\frac{1}{2} = \frac{?}{10}$

1x100=100 4x?=100

$\frac{1}{4} = \frac{?}{100}$

1x100=300 4x?=300

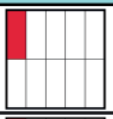
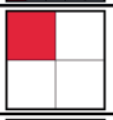
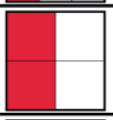
$\frac{3}{4} = \frac{?}{100}$

round to the hundredths place. 5 or more let the circled digit soar, 4 or less let the circled digit rest

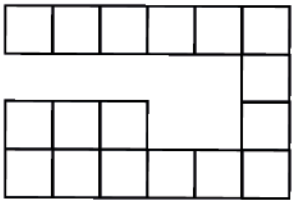
3)1.000

round to the hundredths place. 5 or more let the circled digit soar, 4 or less let the circled digit rest

3)2.000

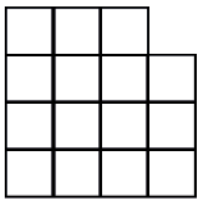
Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{10}$	0.1	10%
			
			
			
			
			
			
			

Find the perimeter and area of each shape (4.50)



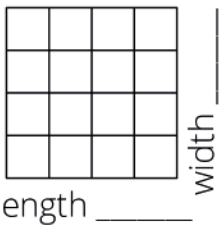
perimeter _____ units

area _____ units^2



perimeter _____ units

area _____ units^2



_____ x _____ = _____

length width area

perimeter _____ units

area _____ units^2

You watched one hour of TV and timed the commercials. They took up two tenths of the time. How many minutes was that?

What percent of the time did the commercials take?

#55 Date _____

Your basketball coach keeps this chart to track the progress of your team.

Shooting Stars Season 3

individual scores per game

(team score us/them)	you	Elijah	Anna	Sarah	Caleb	Nathan
Game 1: 12/16	2	4	2	2	2	0
Game 2: 14/16	4	2	2	2	4	0
Game 3: 18/10	2	4	4	2	2	4
Game 4: 24/12	7	2	6	3	2	4
Game 5: 20/14	5	3	4	2	4	2

What was your mean score for the first five games?

What was Nathan's mean score for the first five games?

What was Elijah's mean score for the first five games?

What was your team's mean score for the first five games?

What percent of the games did your team win?

What percent of the games did your team lose?

Which player on your team is the most likely to score points?

Who on your team is the least likely to score points?

What is the range of your team's scores?

What is your team's median score?

Which individual score is clearly the mode?

Trace then write each term, then draw a line to match each term to its definition.

average

chance

probability

median

mode

range

- the middle number when a set of values is arranged from smallest to largest.
- The number that appears most frequently.
- Also known as the mean, we add all of the addends, then divide the SUM by the number of addends.
- The distance between the highest and the lowest numbers.
- The likelihood that something will happen, stated as a fraction.
- The likelihood that something will happen, stated as a percentage.

How much change will you receive if you pay for each item with $5.00? Write each amount using a cent sign then a dollar sign. (3.18)

99¢

_____ ¢

$ _____

$4.78

_____

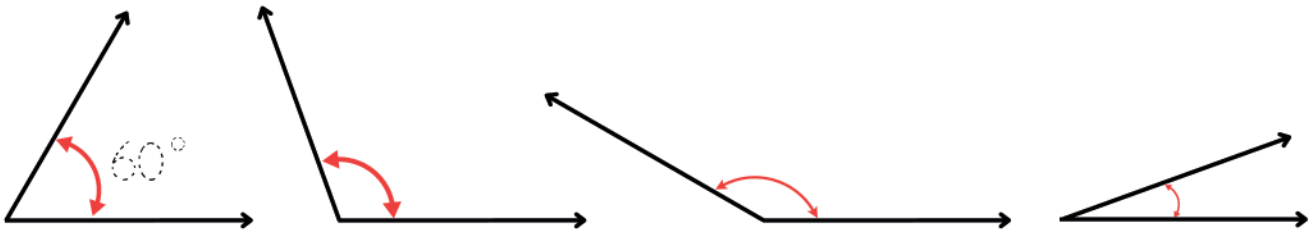
_____

$3.21

_____

_____

Use your protractor to measure each angle. Use units (degree). (4.48)



Solve using the Order of Operations (PEMDAS). (4.6)

$5^2 - 2 \times 9 =$ _____

$6 + 2 \times 2 - 5 =$ _____

$2 + 3^2 =$ _____

$30 \div \sqrt{9} =$ _____

$2 + 22 \div 2 =$ _____

$12 - 2 \times 6 =$ _____

What is the probability that this spinner will stop on a number greater than 4?

This deck of 48 cards has twelve card of each color. If you grab one card, what is the probability it will be green?

If you roll a number cube (numbered 1-6) once, what is the probability you will roll a SQUARED number?

What is the chance?

#57 Date _____

Find the products.

35 x 3	53 x 7	78 x 4	249 x 5	743 x 2	401 x 6
40 x20 = 800	50 x50	80 x30	400 x 40	500 x 60	300 x 40
25 x12 = 300 (2x25, 10x25)	23 x13 (3x23, 10x23)	34 x21 (1x34, 20x34)	32 x15 (5x32, 10x32)	28 x32 (2x28, 30x28)	36 x27
147 x22 = 3234 (2x147, 20x147)	403 x15	311 x24	670 x11	291 x19	351 x23

Solve for x (get x alone) (4.30): Show your work beneath each problem, then check your answers.

$4X + 1 = 7^2$ UNDO everything that has been done to the X

$-1 \quad -1$ subtract one from both sides

$4X = 48$ simplified equation

$\frac{4}{4} \quad \frac{48}{4}$ divide both sides by four to get x alone

$X = 12$ check. $4(12) + 1 = 7^2$ true!

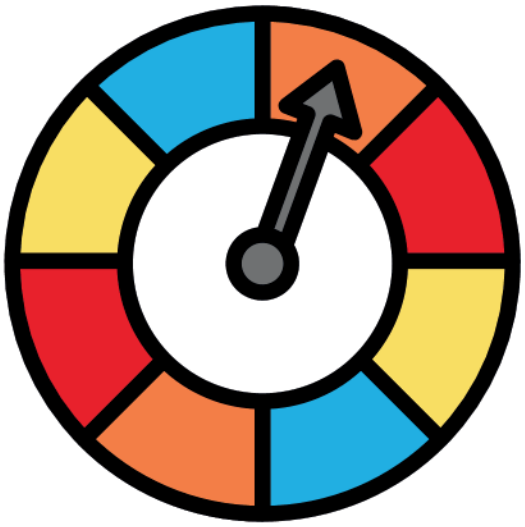
$X(8 - 1) = 56$

$3 + 6X = 45$

$X^2 - \sqrt{9} = 22$

$3(X - 5) = 2 \times 6$

$\sqrt{9} + X = 2^2$



What is the probability of: (4.54)

Landing on an orange space _____

Landing on a red space _____

Landing on a blue space _____

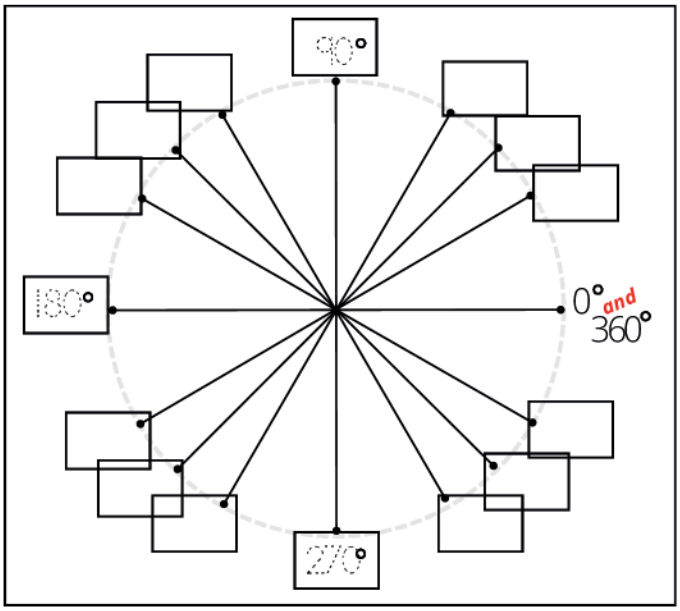
Landing on a yellow space _____

Landing on yellow or blue spaces _____

Landing on red or orange spaces _____

Which color is the most likely? _____

Fill in the boxes around this circle with the correct angle measurements. Use your reference pages if you need to. (4.48)



Draw:

Right Angle (include the small square)

Acute Angle

Straight Angle

Obtuse Angle

Reflex Angle

Solve using the Order of Operations (PEMDAS). (4.6)

$4^2 - 2 \times 4 =$ 8 Step 1. Exponent - four squared is 16
Step 2. Multiplication - two times four is eight
Step 3. Subtraction - sixteen minus eight is eight

$1 + 3 \times 2 =$ _____

$2 \times 3^2 =$ _____

$18 - 9 \div 3 =$ _____

$2 - \sqrt{16} \div 2 =$ _____

$14 - 2 \times 7 =$ _____

#58 Date _____

Fill in the blanks to complete each chart.

	x 10	x 100	x 1000
5			
3			
9			

	x 20	x 200	x 2000
5			
3			
9			

Find the products.

29 x11

Round both numbers to estimate the product.

29 1x29

+290 10x29

319

30 x 10

300

Is it reasonable?

31 x29

Round both numbers to estimate the product.

x

Is it reasonable?

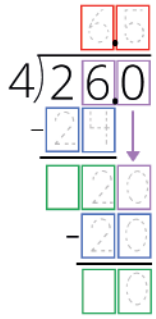
42 x38

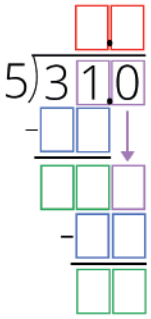
Round both numbers to estimate the product.

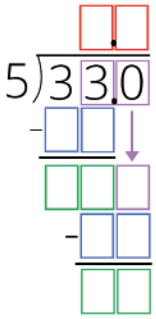
x

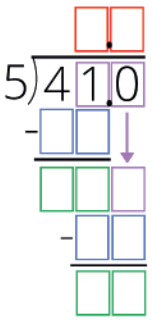
Is it reasonable?

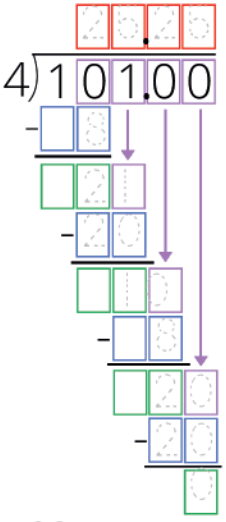
Find the quotients. (4.38)

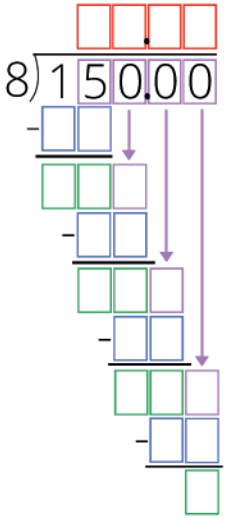


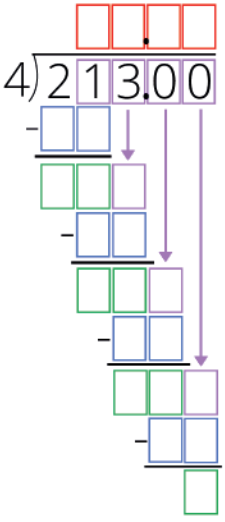


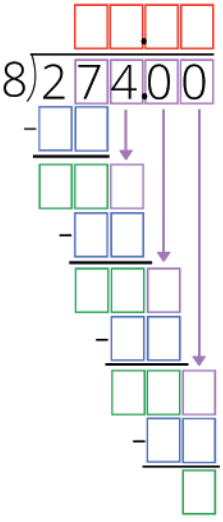












What is the probability of: (4.54)

Picking a pencil _____

Picking a pen _____

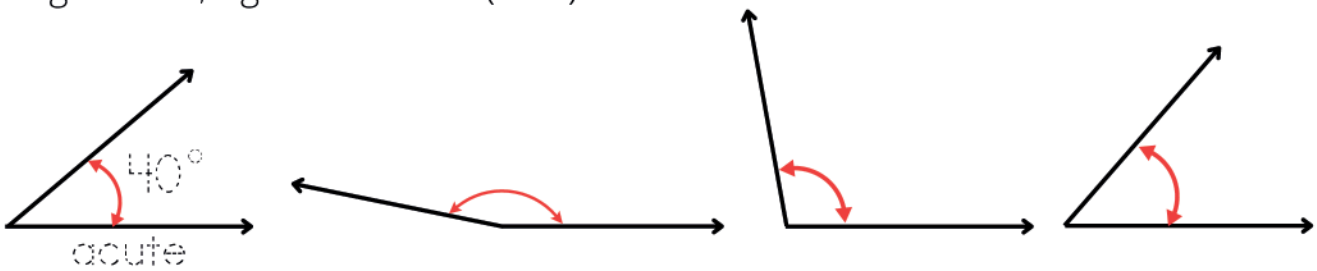
Picking an eraser _____

Picking a sharpener _____

Are you more likely to choose a pencil or pen? _____

Are you more likely to choose an eraser or a sharpener? _____

Use your protractor to measure each angle. Use units (degree). Label each angle acute, right or obtuse. (4.48)



Draw lines to match the word form to the standard form. (4.8)

One hundred forty-seven billion, three hundred seventy-two, one thousand	• 50,018,100,099
Seven billion, one million, one thousand, one hundred	• 6,010,600,010,000
Four hundred three billion, thirty-four million, four hundred thousand, three	• 7,001,001,100
Fifty billion, eighteen million, one hundred thousand, ninety-nine	• 1,900,000
Nine million, one hundred thousand	• 403,034,400,003
One million, nine hundred thousand	• 147,372,001,000
Six trillion, ten billion, six hundred million, ten thousand	• 9,100,000
Eighty-one trillion, eighty-one million, eighteen	• 81,000,081,000,018

#59 Date _____

Find the products.

21×19

189 9x21

+210 10x21

399

Round both numbers to estimate the product.

$20 \times 20 = 400$

Is it reasonable?

28×12

Round both numbers to estimate the product.

$\times$ _____

Is it reasonable?

41×29

Round both numbers to estimate the product.

$\times$ _____

Is it reasonable?

24×13

31×24

48×21

43×15

207×18

131×31

~~X~~

140×132

280 2x140

4200 30x140

+14000 100x140

18480

121×240

217×150

201×115

211×218

Write each of the products from the row above in their word form. (4.8)

Eighteen thousand, four hundred eighty _____

_____

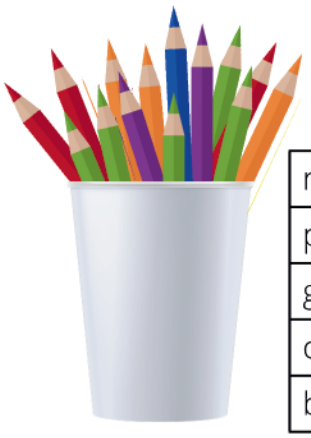
_____

_____

_____

If 3 apples cost $0.99, how much would 8 apples cost?

How many 1 square foot floor tiles are needed to cover a bathroom that is 12 feet long and 14 feet wide?



Build a tally chart:

red	
purple	
green	
orange	
blue	

If you close your eyes and choose a pencil randomly, what is the probability of: (4.54)

Picking a red _____

Picking a green _____

Picking a blue _____

Picking an orange _____

Picking a purple _____

Which color is least likely to be picked? _____

Which color is most likely to be picked? _____

WORD PROBLEMS

Eight, twice, is how much more than four squared?

What is 5 more than the square root of 25?

Complete this chart. Round decimals to the hundredths place and percents to whole numbers. (4.41)

Is the denominator a factor of 10 or 100?

Yes use the butterfly method No divide the numerator by the denominator

4x10=40 5x?=40

$\frac{4}{5} = \frac{\quad}{10}$

3x10=30 5x?=30

$\frac{3}{5} = \frac{\quad}{10}$

2x10=20 5x?=20

$\frac{2}{5} = \frac{\quad}{10}$

1x100=100 4x?=100

$\frac{1}{4} = \frac{\quad}{100}$

1x100=300 4x?=300

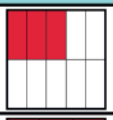
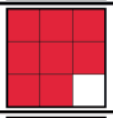
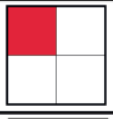
$\frac{3}{4} = \frac{\quad}{100}$

round to the hundredths place.

5 or more let the circled digit soar, 4 or less let the circled digit rest

$8\overline{)5.000}$

$9\overline{)8.000}$

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{3}{10}$	0.3	30%
			
			
			
			
			
			
			

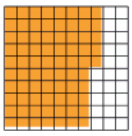
#60 Date _____

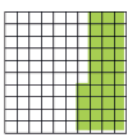
Find the quotients.

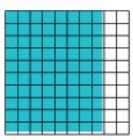
$12\overline{)180}$ $15\overline{)285}$ $11\overline{)253}$ $13\overline{)273}$ $15\overline{)255}$

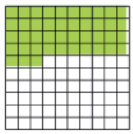
$14\overline{)196}$ $12\overline{)228}$ $10\overline{)430}$ $11\overline{)275}$ $13\overline{)312}$

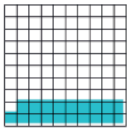
Each block has 100 squares. Write each percentage and each fraction with a denominator of 100 (Per CENT). (4.40)

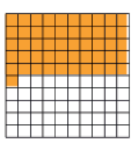

75% = $\frac{75}{100}$


% = $\frac{\quad}{100}$

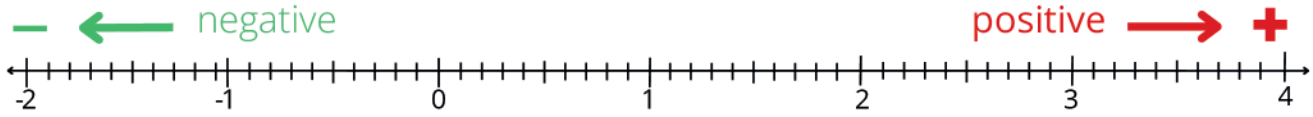

% = $\frac{\quad}{100}$


% = $\frac{\quad}{\quad}$


% = $\frac{\quad}{\quad}$


% = $\frac{\quad}{\quad}$

Use the number line to find each sum or difference. (3.58)



2 - 2.5 = -0.5

4 - 1.3 = ____

1.1 - 2.2 = ____

3.5 - 1.5 = ____

-2 + 2.6 = ____

-1.3 - 0.7 = ____

-1.1 + 2.1 = ____

1 + 2.4 = ____

Find the sums and differences. Remember to simplify! (4.20)

$\frac{1}{8} + \frac{1}{4} = \frac{3}{8}$ $\frac{1}{4} + \frac{1}{3} =$ $\frac{2}{3} - \frac{1}{3} =$ $\frac{4}{7} - \frac{1}{7} =$ $\frac{1}{4} + \frac{1}{4} =$

Stack the numbers, lining up the decimal points. Find the sum or difference. (4.39)

5.4 - 1.02 = 4.38

3.31 + 3.12 = _____

$$\begin{array}{r} 5.40 \\ -1.02 \\ \hline 4.38 \end{array}$$

12.3 - 9.78 = _____

9.89 + 1.01 = _____

Find the products. Multiply fractions straight across. Always simplify! (4.22)

simplify BEFORE multiplying if you can.

$\frac{3}{4} \times \frac{1}{3} = \frac{1}{4}$ One third OF three fourths

$\frac{1}{3} \times \frac{1}{3} =$ One third OF one third

$\frac{2}{5} \times \frac{1}{2} =$ One half OF two fifths

$\frac{1}{4} \times \frac{1}{4} =$ One fourth OF one fourth

Find the quotients. Always simplify! (4.23)

Never divide by a fraction, instead multiply by the reciprocal.

Simplify BEFORE multiplying, if you can. How many times will the second fraction fit inside the first fraction?

$\frac{1}{4} * \frac{3}{1} = \frac{3}{4}$ How many times will 1/3 fit inside 1/4?

$\frac{1}{2} \div \frac{1}{3} =$ How many times will 1/3 fit inside 1/2?

$\frac{6}{8} \div \frac{1}{4} =$ How many times will 1/4 fit inside 6/8?

$1 \div \frac{1}{4} =$ How many times will 1/4 fit inside 1?

$\frac{5}{6} \div \frac{1}{4} =$ How many times will 1/4 fit inside 5/6?

$\frac{3}{4} \div \frac{1}{2} =$ How many times will 1/2 fit inside 3/4?

$\frac{1}{4} \div \frac{1}{2} =$ How many times will 1/2 fit inside 1/4?

$\leftrightarrow$

$\frac{1}{2} \div \frac{1}{4} =$ How many times will 1/4 fit inside 1/2?

Use words to write each number. (4.8)

1349.3 One thousand, three hundred forty-nine and three tenths

7258.1 _____

You built 24 cars from blocks, but you could only find wheels for one third of them (each car has 4 wheels). How many of those cars have wheels? Draw a picture.

How many wheels did you use?

How many wheels do you need to finish all of the cars you built?

#61 Date _____

Draw pictures to solve these problems.

Your sister swims 20 laps every day. How many laps does she swim in a week? 	Your mom drives 70 miles per hour. How far does she drive in 6 hours? 
If you run 7 miles per hour, how far can you run in 3 hours? 	You can jump the rope 45 times in one minute. How many times can you jump in 8 minutes? 
If your mom pays $85 per month for piano lessons, how much money does she pay per year? 	Your family eats four loaves of bread per week. How many do they eat per year? 

Find the quotients. (4.60)

$13\overline{)325}$ $12\overline{)324}$ $14\overline{)406}$ $11\overline{)352}$ $10\overline{)420}$

$15\overline{)645}$ $10\overline{)290}$ $12\overline{)420}$ $10\overline{)360}$ $13\overline{)364}$

Use the menu prices to add up the cost of each meal. Find each customer's change if they pay with a $10.00 bill. Line up the decimals! (4.39)

FOOD TRUCK MENU

Taco	$1.49
Tlacoyo	$1.89
Gordita	$2.75
Torta	$4.99
Tamale (1)	$3.98
Quesadilla	$2.36
Jamaica	$1.77
Horchata	$1.77

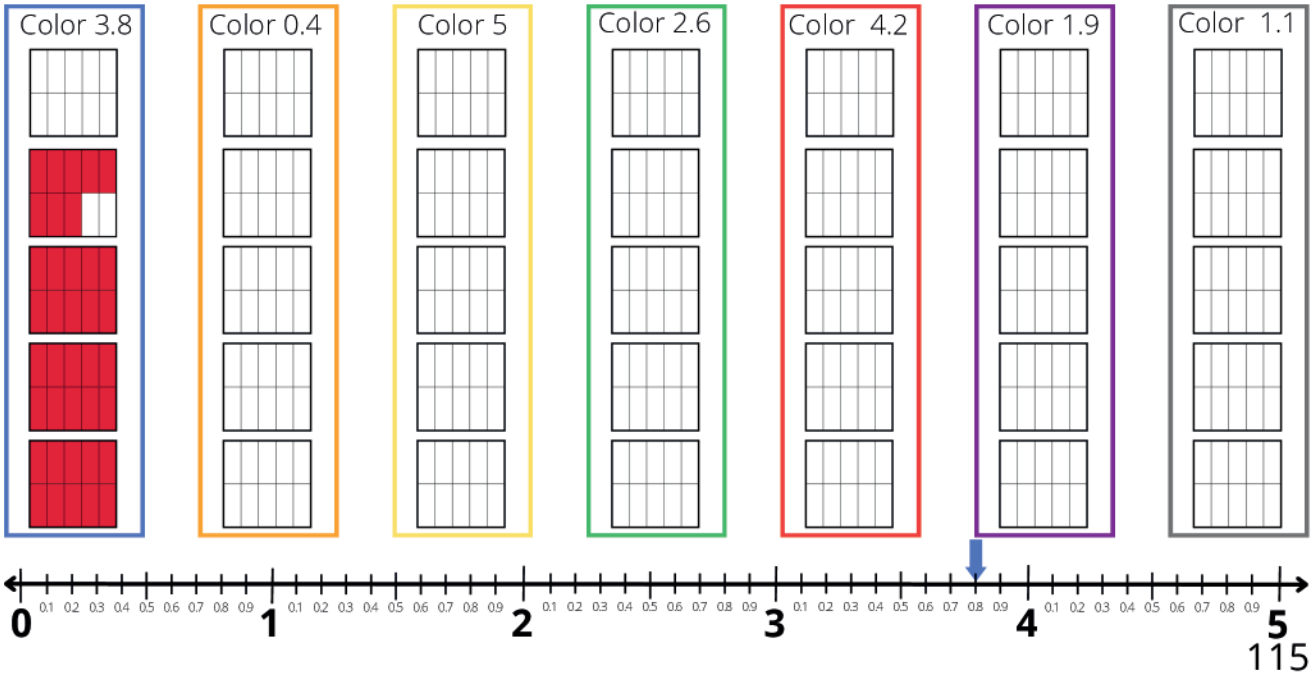
$$\begin{array}{r} 4.99 \\ +\ 1.77 \\ \hline \end{array} \qquad \begin{array}{r} 10.00 \\ - \\ \hline \end{array}$$

Horchata
2 tacos

Jamaica
2 tamales

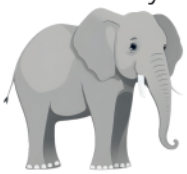
Jamaica
Quesadilla

Color the decimal number in each colored rectangle. Then draw an arrow that color pointing to the number on the number line below. (4.35)

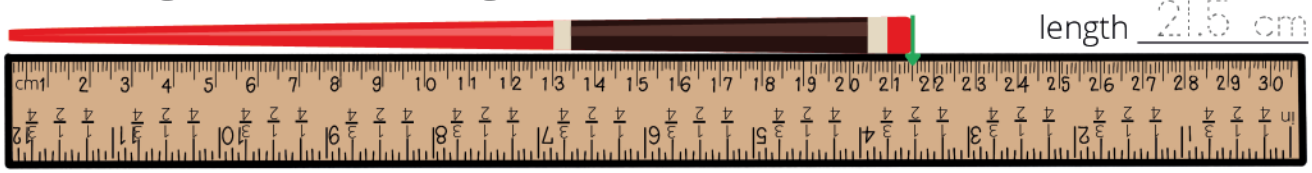


#62 Date _____

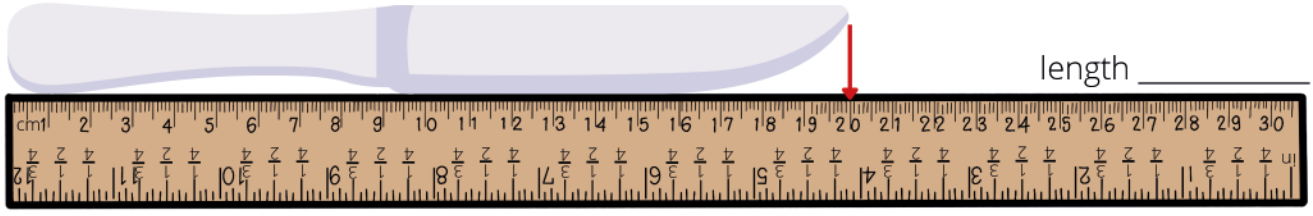
Draw pictures to solve these problems.

Your mom hands out 6 vitamins every morning. The bottles she buys have 180 vitamins each. How many bottles does she buy each year? 	If each bottle of vitamins from the problem to the left costs $35.99, how much does your mom spend on vitamins each year? 
If you can ride your bike 75 miles in 5 hours, what is your average rate of speed per hour? (use units) 	One third of the 24 elephants were African elephants. The rest were Asian elephants. How many were there of each type? 
Johnny planted 5 rows of apple trees with 6 trees in each row. Each tree produced 12 bushels of apples. How many bushels of apples did Johnny harvest? 	Math is the favorite subject of seven eighths of the 56 kids we interviewed. How many kids' favorite subject is math? 

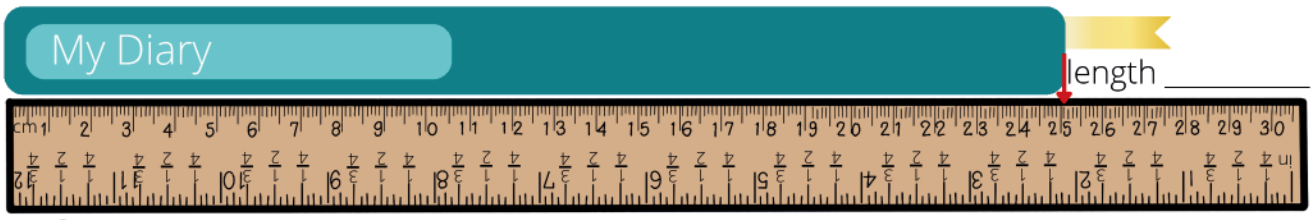
What length are the following items in cm? Write the units.



length 21.5 cm



length _____



length _____

Draw and shade rectangles to find each improper fraction. (4.25)

$2\frac{3}{8} = \frac{19}{8}$ 	$1\frac{3}{4} =$	$2\frac{1}{4} =$
$1\frac{7}{8} =$	$3\frac{5}{8} =$	$4\frac{1}{8} =$

Find the products. Always simplify! (4.22) Simplify BEFORE multiplying whenever you can

$\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$ $\quad \frac{1}{5} \times \frac{3}{5} =$ $\quad \frac{1}{2} \times \frac{3}{4} =$ $\quad \frac{1}{4} \times \frac{4}{5} =$

$\frac{1}{3} \times \frac{3}{5} =$ $\quad 2 \times \frac{1}{2} =$ $\quad \frac{3}{5} \times \frac{5}{4} =$ $\quad \frac{3}{5} \times \frac{5}{6} =$

Find the quotients. Always simplify! (4.23)
Never divide by a fraction, instead multiply by the reciprocal.

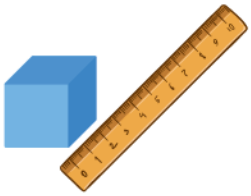
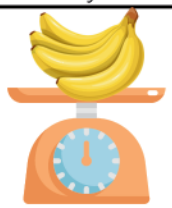
$\frac{3}{5} * \frac{\cancel{1}5}{\cancel{5}1} = \frac{15}{5} = 3$ $\quad \frac{1}{4} \div \frac{3}{4} =$ $\quad \frac{4}{5} \div \frac{1}{4} =$ $\quad \frac{1}{2} \div \frac{1}{4} =$

$\frac{5}{8} \div \frac{1}{4} =$ $\quad 3 \div \frac{1}{3} =$ $\quad \frac{1}{6} \div \frac{1}{6} =$ $\quad \frac{9}{10} \div \frac{3}{5} =$

You bought 3 notebooks for $1.99 each. Sales tax is 10%. You paid with a $10 bill. How much change did you get back? 	A phone plan costs $15 per month. How much does it cost per year? 
If your mom was born in 1995, how old will she be this year? 	If you received twice as many votes as your sister and she received 12 votes, how many votes did you receive? 

#63 Date _____

Which unit of measurement should we use? Circle the correct unit.

 degrees pounds inches	 quarts centimeters	 inches liters grams	 kilograms ounces
 inches feet yards miles	 quarts miles tons	 pounds tons ounces	 degrees feet miles
 pounds yards tons	 degrees feet gallons	 inches pounds miles	 cup tons ounces
 centimeters kilometers	 gallons miles feet	 teaspoon quart yard	 centimeters kilometers

You can earn 5 cents per soda can you collect and take to the recycler. You need to earn $5.75 to pay your library fines. You already have 25 cans. How many more soda cans do you need to collect?

If you read 315 pages last week, how many pages did you AVERAGE per day? If you keep up your average, how many pages will you read in January?

A cow gives 6 gallons of milk per day. How many gallons of milk does she give every year (a regular year, not a leap year)?

Solve using the Order of Operations (PEMDAS). (4.6)

$(5^2 - 3 \div 3) \div 6 =$ ____

Step 1. Solve inside the parentheses
Step 1. Exponent - five squared is 25
Step 2. Division - three divided by 3 is 1
Step 3. Subtraction - twenty-five minus 1 is twenty-four
Step 2. Division - twenty-four divided by six is four

$(13 - 9) \div 2 =$ ____

$2 \times 3 + 16 \div 4 =$ ____

$3 - 8 \div 2 =$ ____

$6^2 - 9 \times 2 =$ ____

$15 - (3 + 7) =$ ____

$3 + 3 \times 3 - 2 =$ ____

$\sqrt{49} + (5 - 2) =$ ____

Find the products. (4.57)

22 x19

Round both numbers to estimate the product.

9x22

10x22

Is it reasonable?

28 x12

Round both numbers to estimate the product.

2x28

10x28

Is it reasonable?

41 x28

Round both numbers to estimate the product.

8x41

20x41

Is it reasonable?

1 foot = 12 inches

1 yard = 3 feet

5280 feet = 1 mile

Convert these **US Customary** units of length. (3.20)

1 yard = _____ feet

2 yards = _____ feet

12 feet = _____ yards

4 feet = _____ inches

1 yard = _____ inches

2 yards = _____ inches

36 inches = _____ feet

1 mile = _____ feet

1/2 mile = _____ feet

2 miles = _____ feet

12 feet = _____ yards

2 yards = _____ inches

1000 mm = 1 m

100 cm = 1 m

1000 m = 1 km

Convert these **metric** length units. (3.20)

1 m = _____ mm

2 m = _____ mm

3000 mm = _____ m

10,000 mm = ____ m

1 m = _____ cm

3 m = _____ cm

500 cm = _____ m

10 m = ____ cm

1 km = _____ m

2000 m = _____ km

11m = _____ cm

11m = ____ mm

#64 Date _____

12 in = 1 ft | 3 ft = 1 yd | 5280 ft = 1 mi

Convert these **US Customary** units of length.

7 yd = _____ ft $7\,\text{yd}\left(\frac{3\,\text{ft}}{1\,\text{yd}}\right) = 21\ \text{ft}$

3 mi = _____ ft $3\,\text{mi}\left(\frac{5280\,\text{ft}}{1\,\text{mi}}\right) =$

48 in = _____ ft $48\,\text{in}\left(\frac{1\,\text{ft}}{12\,\text{in}}\right) =$

5280 ft = _____ yd $5280\,\text{ft}\left(\frac{1\,\text{yd}}{3\,\text{ft}}\right) =$

2 mi = _____ yd $2\,\text{mi}\left(\frac{5280\,\text{ft}}{1\,\text{mi}}\right)\left(\frac{1\,\text{yd}}{3\,\text{ft}}\right) =$

Can you multiply by one, TWICE?

3 x 1 x 1 = 3

3 ft = _____ in

54 ft = _____ yd

54 yd = _____ ft

2 mi = _____ ft

3 yd = _____ in

1000 mm = 1 m | 100 cm = 1 m | 1000 m = 1 km

Convert these **metric** length units.

75 m = _____ mm $75\,\text{m}\left(\frac{1000\,\text{mm}}{1\,\text{m}}\right) = 75000\ \text{mm}$

80 cm = _____m $80\,\text{cm}\left(\frac{1\,\text{m}}{100\,\text{cm}}\right) = \frac{80}{100}\,\text{m} = 0.8\ \text{m}$

91 km = _____ m $91\,\text{km}\left(\frac{1000\,\text{m}}{1\,\text{km}}\right) =$

45 cm = _____ m $45\,\text{cm}\left(\frac{\text{m}}{\text{cm}}\right) =$

103 m = _____ cm $103\,\text{m}\left(\frac{\text{cm}}{\text{m}}\right) =$

2 m = _____ mm $2\,\text{m}\left(\frac{\text{mm}}{\text{m}}\right) =$

17 km = _____ m $17\,\text{km}\left(\frac{\text{m}}{\text{km}}\right) =$

321 cm = _____ m $321\,\text{cm}\left(\frac{\text{m}}{\text{cm}}\right) =$

14 m = _____ km $14\,\text{m}\left(\frac{\text{km}}{\text{m}}\right) =$

2 m = _____ mm

200 cm = _____m

3 km = _____ m

45 m = _____ cm

16 m = _____ cm

400 cm = _____ m

5000 mm = _____ m

100 cm = _____ m

1 m = _____ km

Circle the correct answer.

1 cm	longer than / shorter than / the same as	1 m
5 cm	longer than / shorter than / the same as	50 mm
10 mm	longer than / shorter than / the same as	100 cm
1 m	longer than / shorter than / the same as	100 mm
1 km	longer than / shorter than / the same as	1000 m
2 km	longer than / shorter than / the same as	200 m
25 cm	longer than / shorter than / the same as	25 mm
1000 cm	longer than / shorter than / the same as	1 km

Find the products. (4.57 & 4.59)

$$\begin{array}{r} 27 \\ \times 13 \\ \hline \end{array}$$

Round both numbers to estimate the product.

3x27

10x27

$$\begin{array}{r} 8 \\ +270 \\ \hline 351 \end{array}$$

$$\begin{array}{r} 30 \\ \times 10 \\ \hline 300 \end{array}$$

Is it reasonable?

$$\begin{array}{r} 28 \\ \times 11 \\ \hline \end{array}$$

Round both numbers to estimate the product.

1x28

10x28

$$\times \_\_\_\_\_$$

Is it reasonable?

$$\begin{array}{r} 39 \\ \times 21 \\ \hline \end{array}$$

Round both numbers to estimate the product.

1x39

20x39

$$\times \_\_\_\_\_$$

Is it reasonable?

$$\begin{array}{r} 32 \\ \times 22 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ \times 18 \\ \hline \end{array}$$

$$\begin{array}{r} 29 \\ \times 21 \\ \hline \end{array}$$

$$\begin{array}{r} 22 \\ \times 19 \\ \hline \end{array}$$

$$\begin{array}{r} 110 \\ \times 28 \\ \hline \end{array}$$

$$\begin{array}{r} 101 \\ \times 14 \\ \hline \end{array}$$

$$\begin{array}{r} 134 \\ \times 203 \\ \hline \end{array}$$

3x134

0x134

200x134

$$\begin{array}{r} 402 \\ 000 \\ +26800 \\ \hline 27202 \end{array}$$

$$\begin{array}{r} 215 \\ \times 212 \\ \hline \end{array}$$

$$\begin{array}{r} 207 \\ \times 123 \\ \hline \end{array}$$

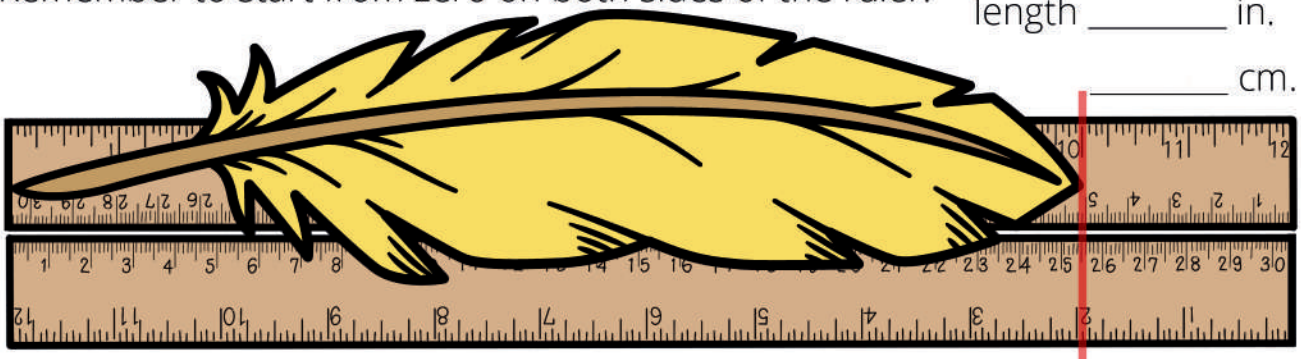
$$\begin{array}{r} 152 \\ \times 231 \\ \hline \end{array}$$

$$\begin{array}{r} 111 \\ \times 132 \\ \hline \end{array}$$

#65 Date _____

Measure each item in both in. and cm. Write amounts in fractions or decimals. Remember to start from zero on both sides of the ruler.

length _____ in.

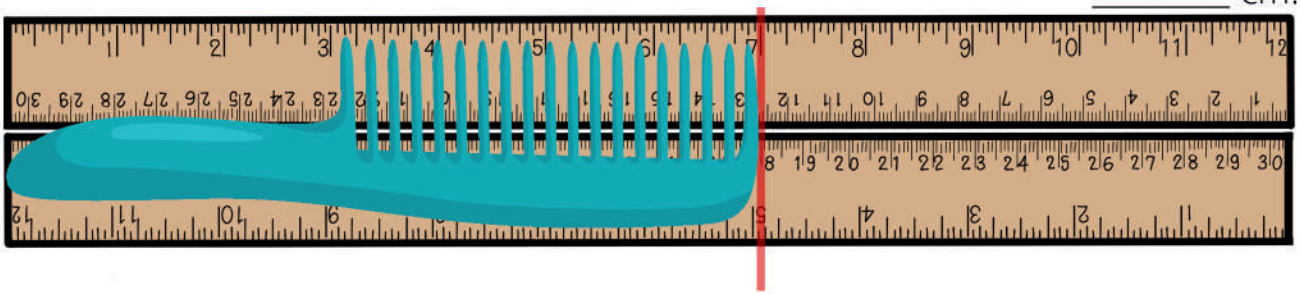


_____ cm.

length _____ in.

_____ cm.

length _____ in.



_____ cm.

Use a ruler to measure these line segments in customary and metric units. Use decimals.

_____	4 in.	10 cm.
_____	_____	_____
_____	_____	_____

Sometimes there is no direct conversion, so you have to use TWO conversion factors to reach the unit you need. (Multiply by one, TWICE!)

12 in = 1 ft	3 ft = 1 yd	5280 ft = 1 mi

4 yd = _____ in $\quad 4\text{ yd}\left(\frac{3\text{ ft}}{1\text{ yd}}\right)\left(\frac{12\text{ in}}{1\text{ ft}}\right) = \frac{144}{1}\text{ in.} = 144\text{ in.}$ (4 x 3 x 12 = 144)

3 mi = _____ yd $\quad 3\text{ mi}\left(\frac{5280\text{ ft}}{1\text{ mi}}\right)\left(\frac{1\text{ yd}}{3\text{ ft}}\right) = \frac{3 \times 5280}{3}\text{ yd.}$

1 mi = _____ in $\quad 1\text{ mi}\left(\frac{\quad\text{ ft}}{\text{mi}}\right)\left(\frac{\quad\text{ in}}{\text{ft}}\right) =$

18 in = _____ yd $\quad 18\text{ in}\left(\frac{\quad\text{ ft}}{\text{in}}\right)\left(\frac{\quad\text{ yd}}{\text{ft}}\right) =$

reduce each answer to its simplest form

Convert to the BASE UNIT (meter) and then to the desired unit. (Multiply by one, TWICE, if needed)

kilo	hecta	deca	base unit	deci	centi	milli
1000 m = 1 km	100 m = 1 hm	10 m = 1 dam	meter	1 m = 10 dm	1 m = 100 cm	1 m = 1000 mm

90000 mm = _____ km $\quad 90000\text{ mm}\left(\frac{1\text{ m}}{1000\text{ mm}}\right)\left(\frac{1\text{ km}}{1000\text{ m}}\right) = \frac{90000}{100 \times 1000} = \frac{9}{100}\text{ km.} = 0.09\text{ km.}$

52 cm = _____ mm $\quad 52\text{ cm}\left(\frac{1\text{ m}}{100\text{ cm}}\right)\left(\frac{1000\text{ mm}}{1\text{ m}}\right) =$

3 km = _____ cm $\quad 3\text{ km}\left(\frac{\text{m}}{\text{km}}\right)\left(\frac{\text{cm}}{\text{m}}\right) =$

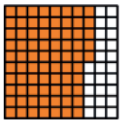
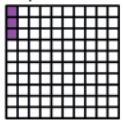
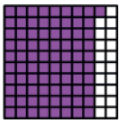
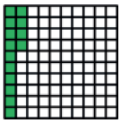
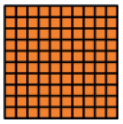
3900 m = _____ km $\quad 3900\text{ m}\left(\frac{\text{km}}{\text{m}}\right) =$

We only need one unit fraction to go from m to km.

Do you see the pattern?

Multiply by 10 for each box you move to the right; divide by 10 for each box you move to the left. Multiplying by 10 moves the decimal place one digit to the right. Dividing by 10 moves the decimal place one digit to the left.

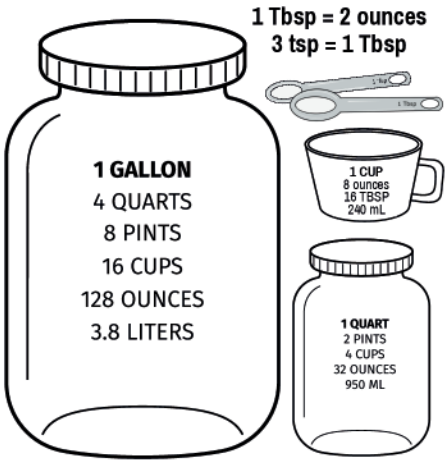
Write these shaded parts as fractions, decimals and percentages. (4.41)

$\frac{75}{100}$				
0.75				
75%				

#66 Date _____

Convert these US Customary Units.



1 gal = _____ qt

1 qt = _____ c

1 gal = _____ c

16 oz = _____ c

2 Tbsp = _____ oz

2 Tbsp = _____ tsp

8 pt = _____ gal

1 gal = _____ oz

9 Tbsp = _____ oz

20 c = _____ gal _____ qt

6 c = _____ qt _____ pt

160 oz = _____ gal _____qt

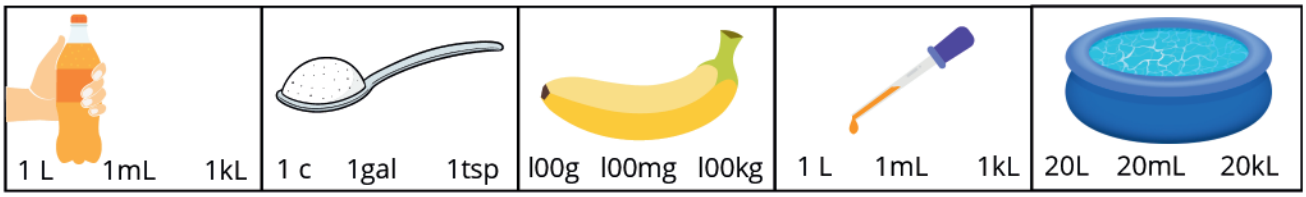
12 oz = _____ c _____Tbsp

5 gal = _____ qt

6 qt = _____ gal _____ c

10 tsp = _____ Tbsp _____tsp

Circle the best estimate of the volume of each item.



Convert to the BASE UNIT (liter) and then to the desired unit. (Multiply by one, TWICE, if needed)

kilo	hecta	deca	base unit	deci	centi	milli
1000 L = 1 kL	100 L = 1 hL	10 L = 1 daL	liter	1 L = 10 dL	1 L = 100 cL	1 L = 1000 mL

17 L = _____ dL

900 L = _____ kL

300 hL = _____ L

1000 kL = _____ L

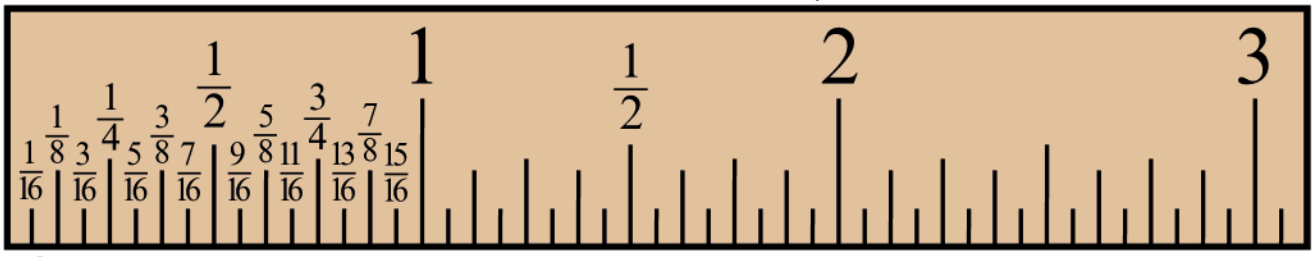
3 daL = 300 dL $3\ daL\left(\frac{10L}{1\ daL}\right)\left(\frac{10dL}{1L}\right)=\frac{3\times10\times10}{1}=300dL$

8 dL = _____ mL $8\ dL\left(\frac{1L}{10dL}\right)\left(\frac{1000\ mL}{1L}\right)=\frac{8\times1000}{10}=$

5 hL = _____ cL $5\ hL\left(\frac{L}{hL}\right)\left(\frac{cL}{L}\right)=$

97000 mL = _____ L $97000\ mL\left(\frac{L}{mL}\right)=$

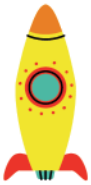
Label each vertical line on this ruler. Use the simplest form of each fraction.



Multiply mentally. (4.52)

20	30	50	700	400	800
x 40	x 70	x 60	x 400	x 300	x 400

This rocket is $17.00 and sales tax is 10%. What is the total price? (4.46)



price + sales tax (10% OF $17.00) = total price

If you pay with a $20 bill, what is your change?

This squishmallow is $35.00. Sales tax is 10%. What is the total price?

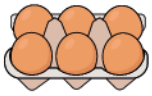
price + sales tax (10% OF $35.00) = total price

If you pay with a $100 bill, what is your change?

This TV is $595.00 and sales tax is 10%. What is the total price?

price + sales tax (10% OF $595.00) = total price

Solve these word problems. (4.26)

I bought two boxes of eggs. Each had five dozen eggs. How many eggs did I buy? 	I have 15 chickens. They each lay one egg per day. Three of them lay green eggs, the rest of them lay brown eggs. How many brown eggs do I get each week? How many green eggs do I get each week? 
I have a sack of 25 red and white marbles. Two fifths of the marbles are white. How many marbles are white? How many marbles are red? 	The library is selling their old books for $0.25 each. How many books can I buy if I have $5.00? 

#67 Date _____

How much does each item weigh?

____ lb ____ oz ____ lb ____ oz ____ lb ____ oz ____ lb ____ oz ____ lb ____ oz

What is the mass of each item?

____ kg ____ g ____ kg ____ g ____ kg ____ g ____ kg ____ g ____ kg ____ g

Use the number line to find each sum or difference. (3.58)

3 - 4.5 = -1.5 1 + 2.1 = ____ -2 + 1.5 = ____

1 - 1.5 = ____ 1.3 - 0.3 = ____ -1.5 + 2 = ____

2.5 - 3 = ____ -1 + 1.8 = ____ -1 - 0.5 = ____

1.5 - 1.5 = ____ 2 + 1.1 = ____ 1 + 2.5 = ____

Find the sums and differences. Remember to simplify! (4.20)

$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$ $\frac{1}{4} + \frac{3}{8} =$ $\frac{2}{3} - \frac{1}{6} =$ $\frac{4}{5} + \frac{1}{10} =$ $\frac{1}{3} - \frac{1}{5} =$

Stack the numbers, lining up the decimal points. Find the sum or difference. (4.39)

11.2 - 1.52 = 9.68

$$\begin{array}{r} 11.20 \\ -1.52 \\ \hline 9.68 \end{array}$$

6.42 - 3.73 = _____

1.99 + 9.99 = _____

2.05 - 1.1 = _____

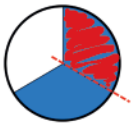
Find the products. Multiply fractions straight across. Always simplify! (4.22)

simplify BEFORE multiplying if you can.

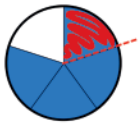
$\frac{1}{5}$ of $\frac{5}{10} = \frac{1}{10}$ $\frac{2}{3} \times \frac{1}{2} =$ $\frac{4}{5} \times \frac{1}{4} =$

One half (five tenths) OF one fifth is one tenth

One half OF two thirds is _____



One fourth OF four fifths is _____



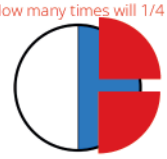
Find the quotients. Always simplify! (4.23)

Never divide by a fraction, instead multiply by the reciprocal.

Simplify BEFORE multiplying, if you can. How many times will the second fraction fit inside the first fraction?

$\frac{1}{2} * \frac{1}{4} \frac{4}{1} = \frac{4}{2} = 2$ $\frac{1}{2} \div \frac{1}{8} =$ $\frac{1}{2} \div \frac{1}{6} =$ $1 \div \frac{1}{2} =$

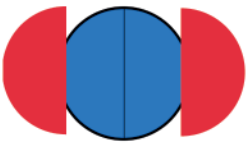
How many times will 1/4 fit inside 1/2?



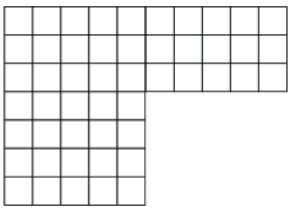
How many times will 1/8 fit inside 1/2?

How many times will 1/6 fit inside 1/2?

How many times will 1/2 fit inside 1?

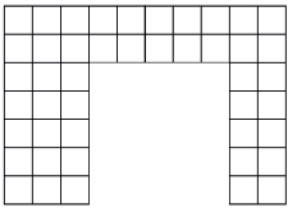


Find the perimeter and area of each shape (4.50)



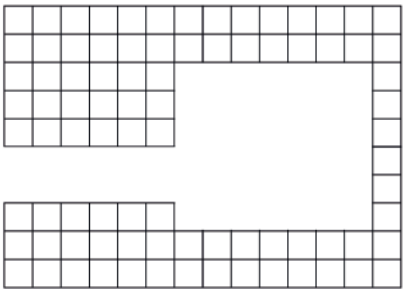
perimeter _____ units

area _____ units^2



perimeter _____ units

area _____ units^2



perimeter _____ units

area _____ units^2

#68 Date _____

$2 \times 1 =$

$2 \times 10 =$

$2 \times 100 =$

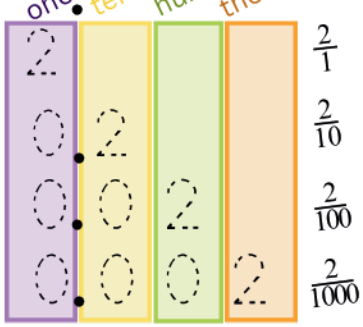
$2 \times 1000 =$

$2 \div 1 =$

$2 \div 10 =$

$2 \div 100 =$

$2 \div 1000 =$

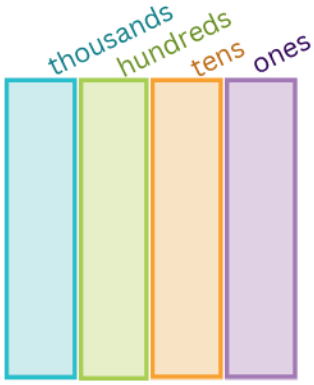


$9 \times 1 =$

$9 \times 10 =$

$9 \times 100 =$

$9 \times 1000 =$

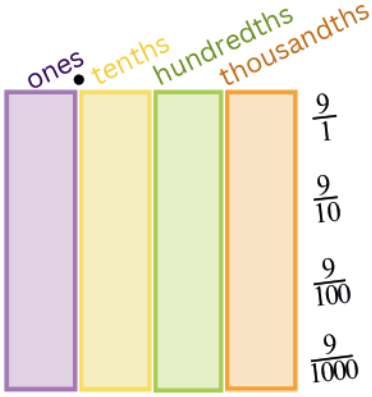


$9 \div 1 =$

$9 \div 10 =$

$9 \div 100 =$

$9 \div 1000 =$



Find the products and quotients.

$19 \times 10 =$ 190 $\qquad 19 \div 10 =$ 1.9

$501 \times 10 =$ _____ $\qquad 501 \div 10 =$ _____

$623 \times 10 =$ _____ $\qquad 623 \div 10 =$ _____

$78 \times 10 =$ _____ $\qquad 78 \div 10 =$ _____

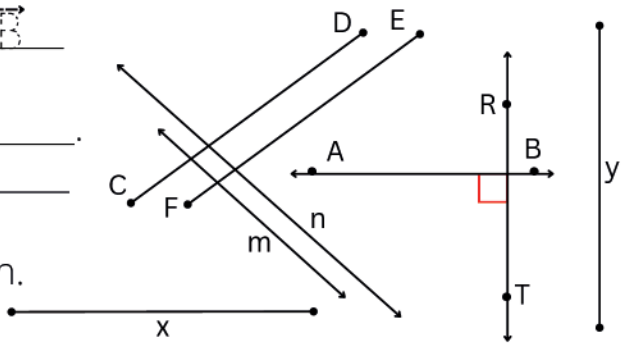
$124 \times 10 =$ _____ $\qquad 124 \div 10 =$ _____

Draw lines to match the decimals and fractions. (4.36)

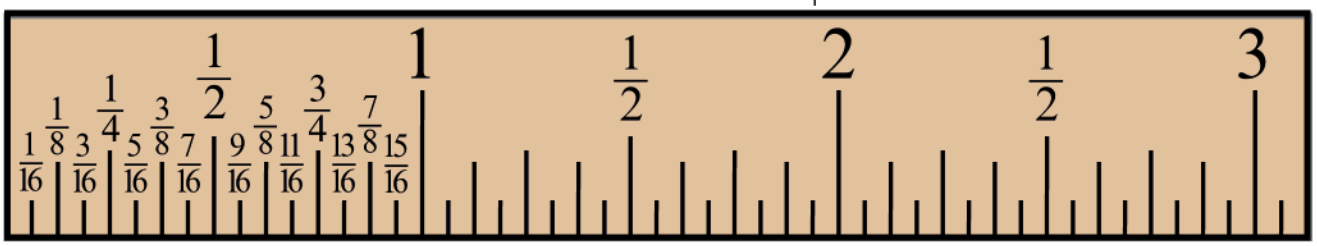
0.4	0.04	0. 07	0.007	0.09	0.9	0.009	0.004	0.7
$\frac{9}{10}$	$\frac{7}{10}$	$\frac{9}{1000}$	$\frac{4}{10}$	$\frac{4}{1000}$	$\frac{4}{100}$	$\frac{7}{100}$	$\frac{9}{100}$	$\frac{7}{1000}$

(4.48)

1. Name the two perpendicular lines: $\overleftrightarrow{AB}$ and _____
2. Name the two parallel lines: _____ and _____.
3. Name the two parallel line segments: _____ and _____.
4. Trace the horizontal line segment green.
5. Trace the vertical line segment red.



Label each vertical line on this ruler. Use the simplest form of each fraction.



Complete this chart. Write fractions in their simplest form. Round decimals to the **thousandths place** and percents to the **tenths place**. (4.41)

Is the denominator a factor of 10 or 100?

Yes use the butterfly method

No divide the numerator by the denominator

round to the thousandths place. ← 5 or more let the circled digit soar, 4 or less let the circled digit rest

$16\overline{)1.0000}$

$16\overline{)3.0000}$

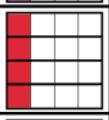
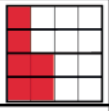
1x100=100 4x?=100

$\frac{1}{4} = \frac{?}{100}$

1x10=10 2x?=10

$\frac{1}{2} = \frac{?}{10}$

$8\overline{)1.000}$ $8\overline{)3.000}$ $16\overline{)5.0000}$ $16\overline{)7.0000}$

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{16}$	0.063	6.3%
	$\frac{1}{8}$	0.125	12.5%
			
			
			
			
			
			

#69 Date _____

ten thousands	thousands	hundreds	tens	ones
		2	5	
		2	5	0

25 x 1 =

25 x 10 =

25 x 100 =

25 x 1000 =

25 ÷ 1 =

25 ÷ 10 =

25 ÷ 100 =

25 ÷ 1000 =

tens	ones	tenths	hundredths	thousandths
2	5			
2	5			
0	2	5		

$\frac{25}{10} = 2\frac{5}{10}$

$\frac{25}{100}$

$\frac{25}{1000}$

34 x 1 =

34 x 10 =

34 x 100 =

34 x 1000 =

34 ÷ 1 =

34 ÷ 10 =

34 ÷ 100 =

34 ÷ 1000 =

$\frac{34}{10} = 3\frac{4}{10}$

$\frac{34}{100}$

$\frac{34}{1000}$

Find the products and quotients.

12 x 100 = 1200

591 x 100 = _____

39 ÷ 3 = _____

55 ÷ 5 = _____

224 ÷ 2 = _____

12 ÷ 100 = 0.12

591 ÷ 100 = _____

39 ÷ 30 = _____

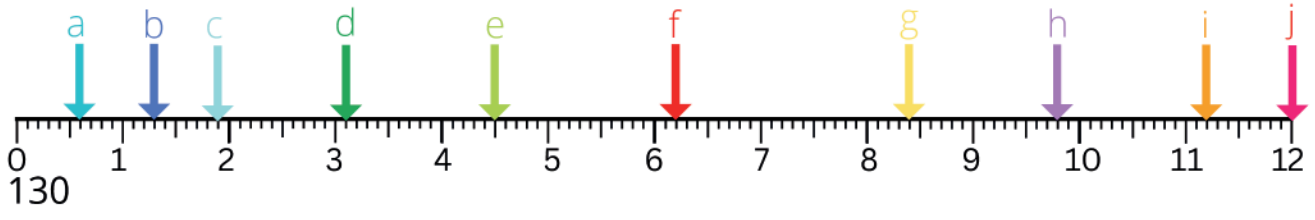
55 ÷ 50 = _____

224 ÷ 20 = _____

To which decimal number does each arrow point? (4.35)

a 0.6 c _____ e _____ g _____ i _____

b _____ d _____ f _____ h _____ j _____



Magic Squares. Use the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9 once each to fill the empty squares so all columns, rows and diagonals add up to the same magic constant of 15.

8		
	5	
4		

	9	
		3
	1	

7		
6		
2		

3		
	9	
		6

		8
	7	
		4

Tip: identify all of the sequences of 3 numbers which, added together, make 15.
For example: 8 + 1 + 6 = 15
3 + 5 + 7 = 15
6 + 7 + 2 = 15

Magic Squares. Use the numbers -4, -3, -2, -1, 0, 1, 2, 3, 4 once each to fill the empty squares so all columns, rows and diagonals add up to the same magic constant of 0.

-1	-2	
	0	

	0	
3		1

1		
	0	
-3		

3	-4	
-2		

	0	4
		-1

quantity means parentheses $3(7 + 5)$

Find three times the quantity of seven and five.

What is twice the quantity of seven less than ten?

There are three piles of books on your shelf. One pile has 9 books, another has 8 books and the last pile has 4 books. If you rearrange them so all of the piles have the same number of books, how many books will be in each pile?

The man had 13 caps on his head and he carried 27 caps in his arms. When he fell asleep, 5 monkeys stole the caps and divided them evenly. How many caps does each monkey have?

Admission to the zoo is $15.75 for adults and $9.50 for kids. If your mom buys tickets for 2 adults and 5 kids, how much will she pay?

Ten quarters is how much money? Write the amount two ways (using $ and cents).

How many nickels is the same amount?

#70 Date _____

Use prime factorization and cancellation to simplify these fractions.

$\frac{45}{50} = \frac{3 \cdot 3 \cdot \cancel{5}}{5 \cdot 2 \cdot \cancel{5}} = \frac{9}{10}$ (45 = 9 × 5; 9 = 3 × 3; 50 = 10 × 5; 10 = 5 × 2)

$\frac{39}{65} = \frac{3 \cdot \cancel{13}}{5 \cdot \cancel{13}} = \frac{3}{5}$

$\frac{35}{42} =$

$\frac{63}{72} =$

$\frac{120}{150} =$

$\frac{105}{126} =$

$\frac{108}{135} =$

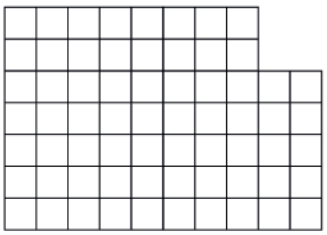
$\frac{120}{140} =$

Write the missing operator (+, -, x, ÷) in empty squares to make each number sentence true. Remember to apply the Order of Operations, PEMDAS. (4.30)

2	+	5		3		1	=	16
1	+	4		4		1	=	3
3	+	0		17		1	=	2

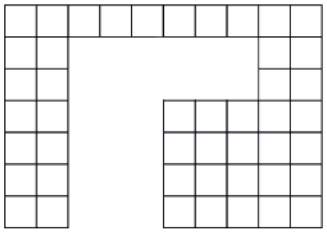
7	-	2		2		3	=	6
7	-	(2		2		3)	=	0
(7	-	2)		2		3	=	13

Find the perimeter and area of each shape. (4.50)



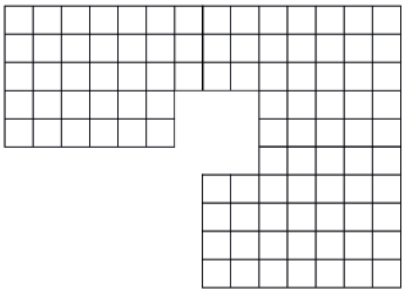
perimeter _____ units

area _____ units^2



perimeter _____ units

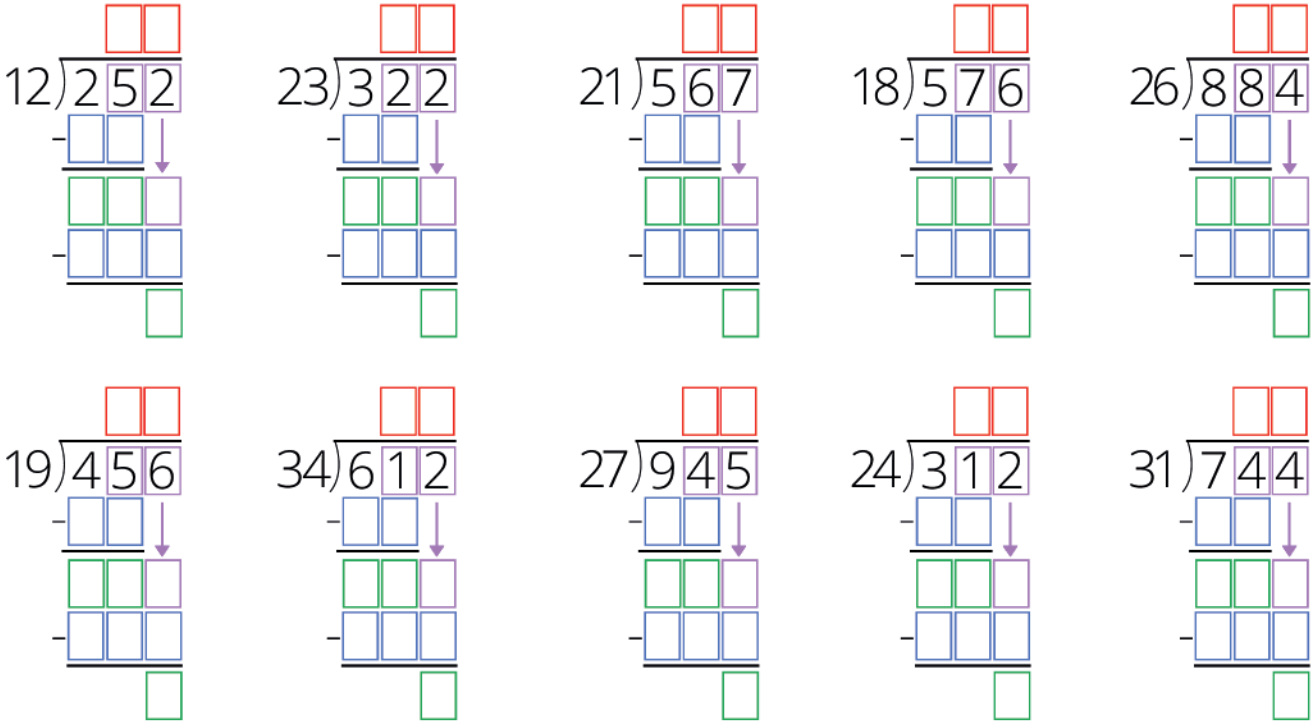
area _____ units^2



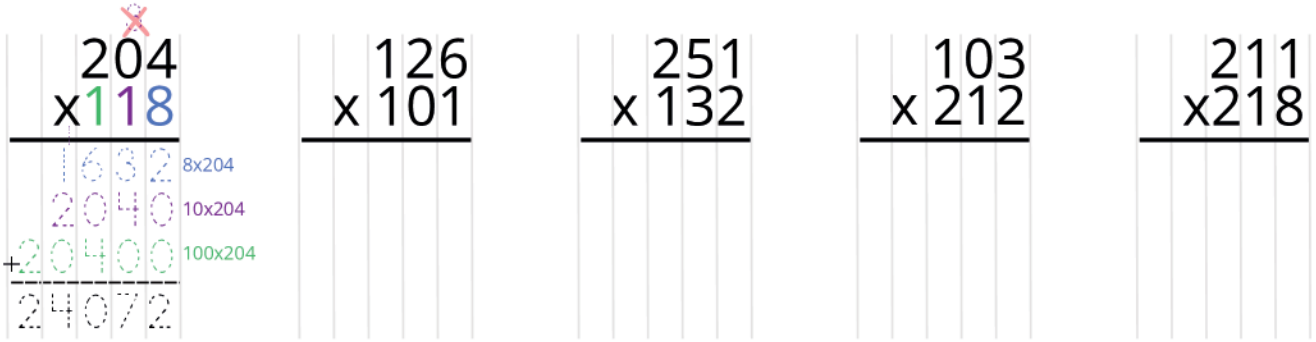
perimeter _____ units

area _____ units^2

Find the quotients. (4.60)



Find the products. (4.59)



Round each number to the nearest: (4.11)

2174

Ten _____

Hundred _____

Thousand _____

5918

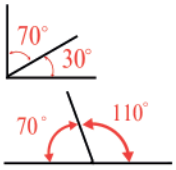
Ten _____

Hundred _____

Thousand _____

#71 Date _____

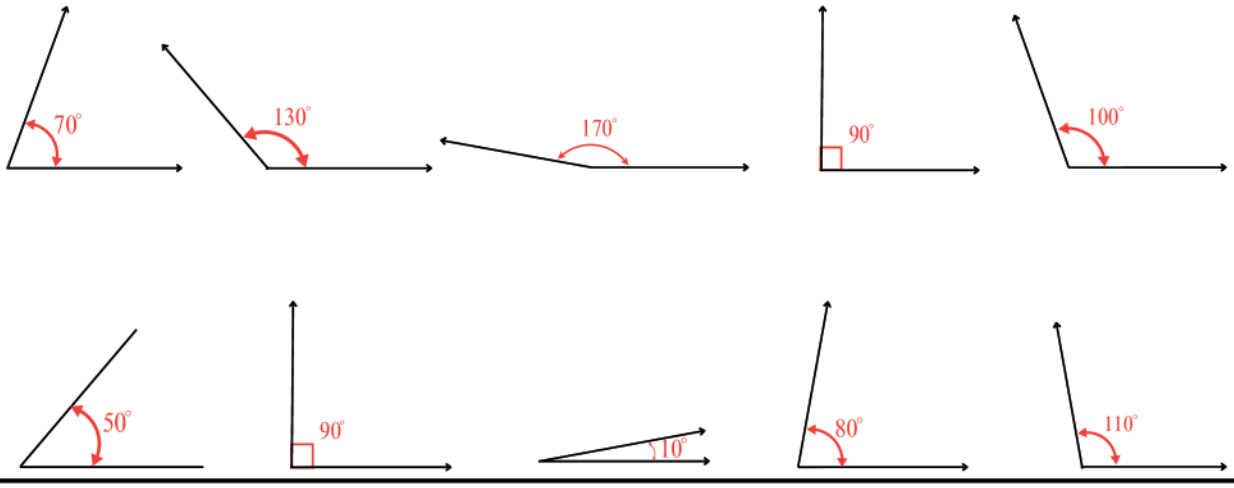
COMPLEMENTARY angles add up to 90 degrees.
SUPPLEMENTARY angles add up to 180 degrees.



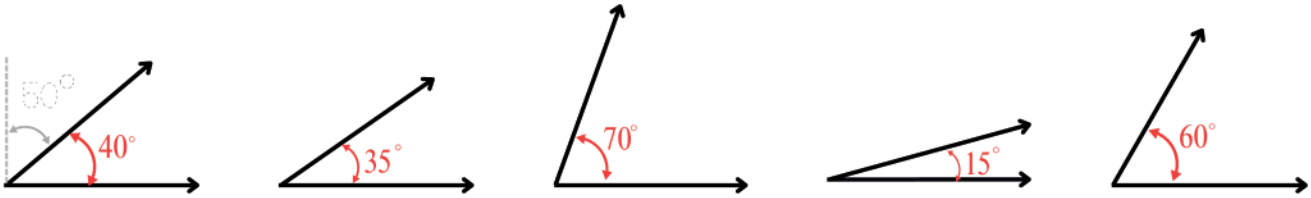
complementary angles

supplementary angles

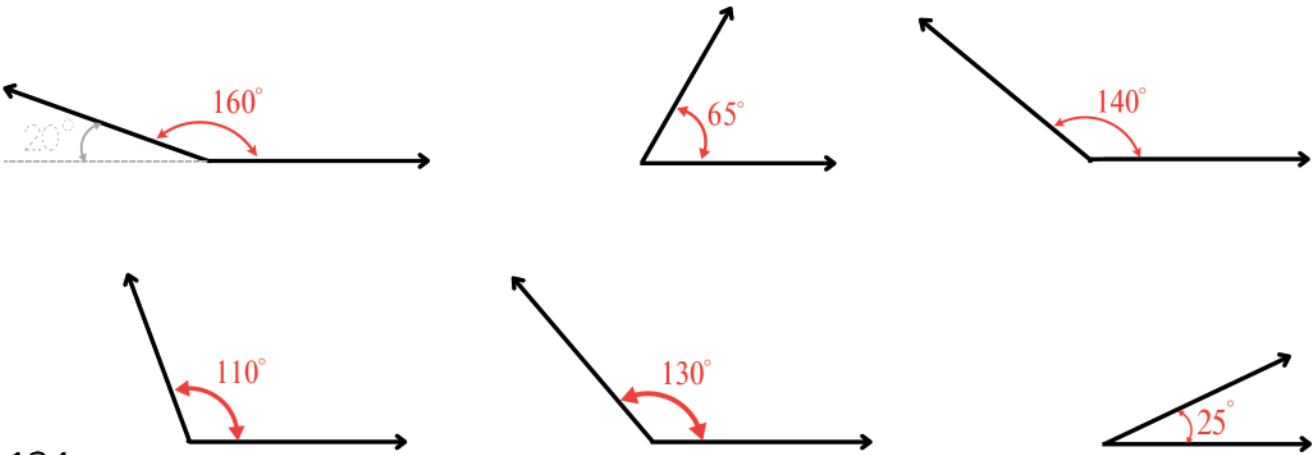
Draw lines to match each angle from the top row with its SUPPLEMENTAL angle on the bottom row. The two angles should add up to 180 degrees.



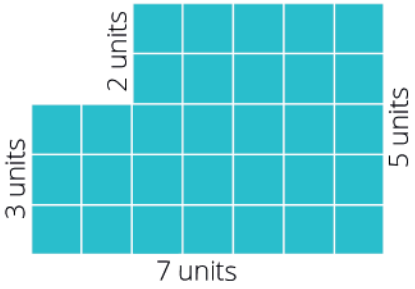
Draw and label the complement of each angle.



Draw and label the supplement of each angle.



Find the missing dimensions, then divide each shape into two or three rectangles. Find the perimeter and the area of each small rectangle, then add up those areas to find the area of the WHOLE shape. All of the angles are RIGHT ANGLES. (4.50)

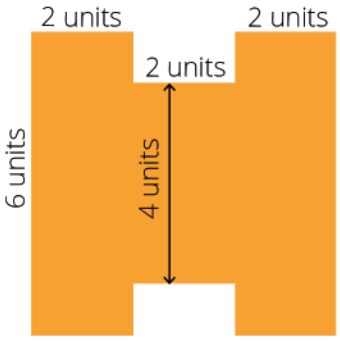


_____ (length) x _____ (width) = _____ (area)

_____ (length) x _____ (width) = _____ (area)

perimeter _____ units

area _____ units^2



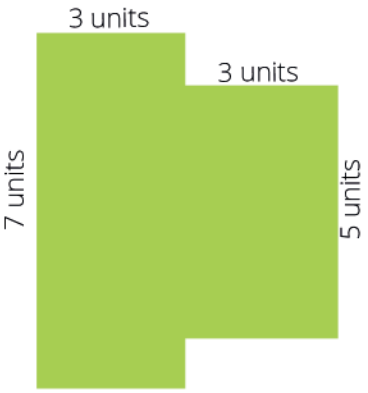
_____ (length) x _____ (width) = _____ (area)

_____ (length) x _____ (width) = _____ (area)

_____ (length) x _____ (width) = _____ (area)

perimeter _____ units

area _____ units^2



_____ (length) x _____ (width) = _____ (area)

_____ (length) x _____ (width) = _____ (area)

perimeter _____ units

area _____ units^2

Write each term twice.

complementary angles

supplementary angles

How heavy was the puppy at 3 weeks?

Name four weeks that the puppy did not gain weight.

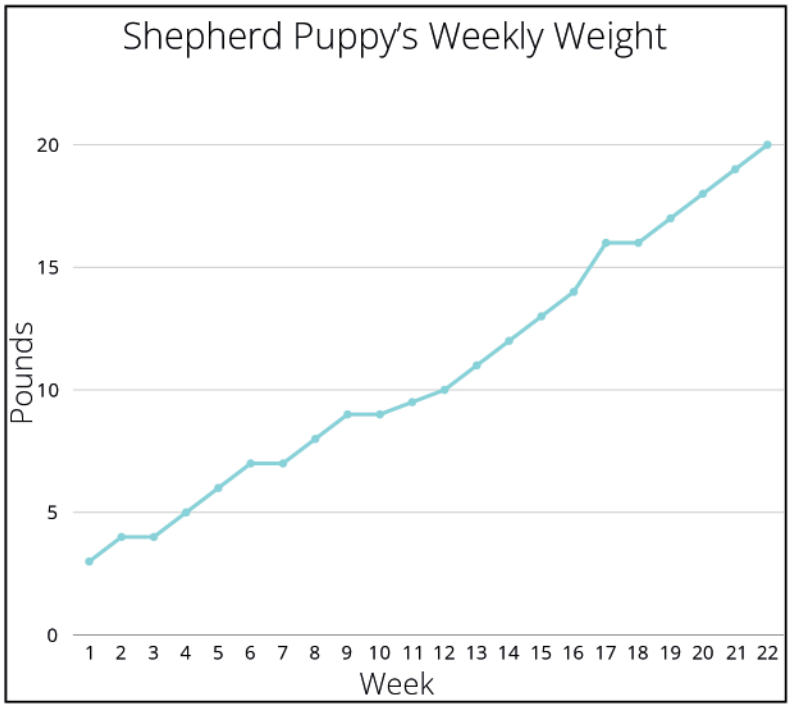
How much weight did the puppy gain in his first four weeks?

How much weight did the puppy gain from birth to 18 weeks?

How old was the puppy when the data ended?

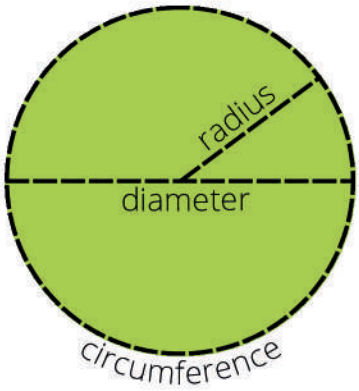
Which week did the puppy gain the most weight?

Why is it important to label the axes of the graph?



#72 Date _____

Parts of a circle:

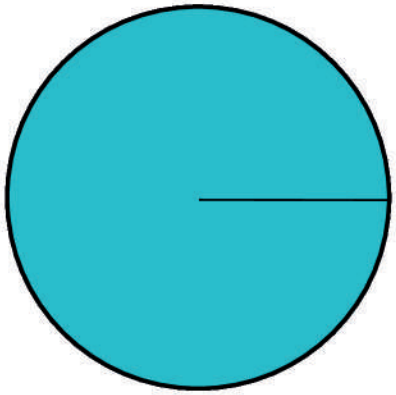


area = πr^2
circumference = $2\pi r$

the area of the circle is green

π = 3.14

Measure the length of the radius, then calculate the other dimensions.



radius _____

diameter _____

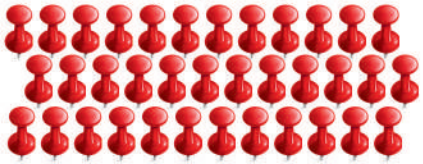
circumference _____

bonus question, give it your best try → area _____

Divide the marbles into SIX equal groups. (4.16)

What is 1/6 of 36?
What is 2/6 of 36?
What is 3/6 of 36?
What is 4/6 of 36?
What is 5/6 of 36?
What is 6/6 of 36?

Divide the pushpins into THREE equal groups.



What is 1/3 of 36?
What is 2/3 of 36?
What is 3/3 of 36?

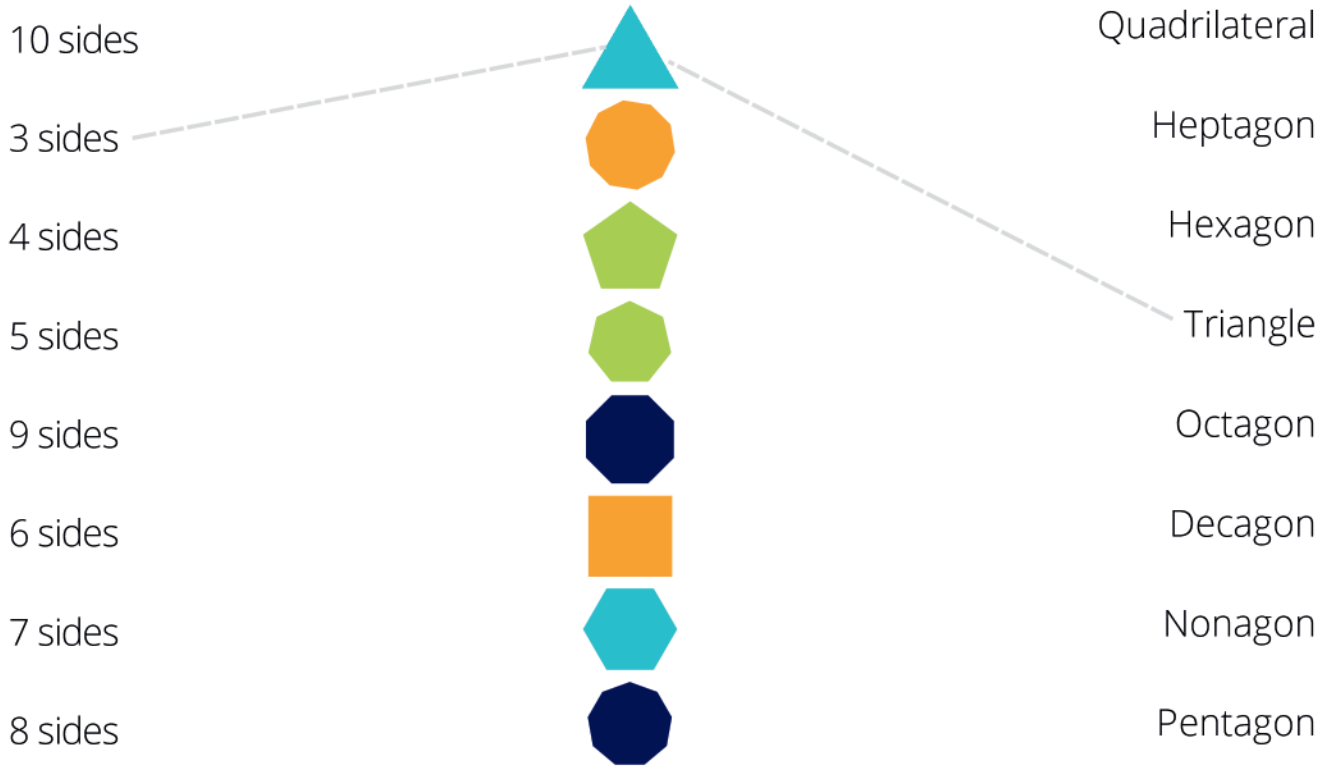
Divide the paperclips into TWELVE equal groups.

What is 1/12 of 36?
What is 3/12 of 36?
What is 4/12 of 36?
What is 6/12 of 36?
What is 8/12 of 36?
What is 9/12 of 36?

$\frac{1}{12}$ of 36= $\frac{2}{12}$ of 36= $\frac{3}{12}$ of 36= $\frac{4}{12}$ of 36= $\frac{6}{12}$ of 36=

$\frac{11}{12}$ of 36= $\frac{1}{6}$ of 36= $\frac{1}{4}$ of 36= $\frac{1}{3}$ of 36= $\frac{1}{2}$ of 36=

Draw lines to match the polygons across all three columns. (4.49)

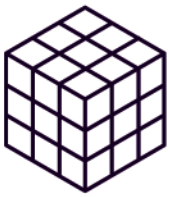


quantity means parentheses

WORD PROBLEMS

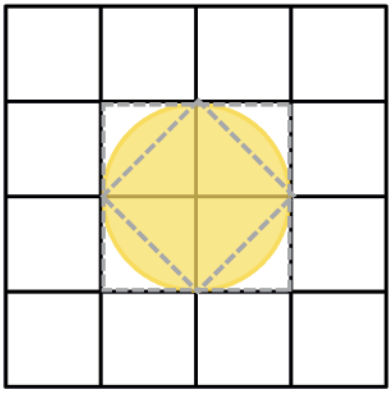
Find five times the quantity of four and five.

What is half the quantity of three increased by nine?

If the perimeter of a square is 3 feet, each side is how many inches long?	This cube is made of how many small cubes? 
The first five square numbers are 1, 4, 9, 16 and 25. What are the next five square numbers?	You cooked 35 potstickers for your lunches all week. How many should you put in each days' lunch?

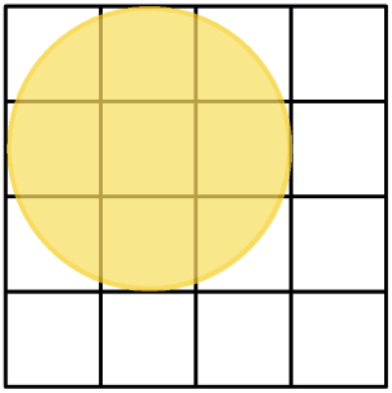
#74 Date _____

Use the grid to estimate the area of each shape. Each square on the grid is one unit squared.

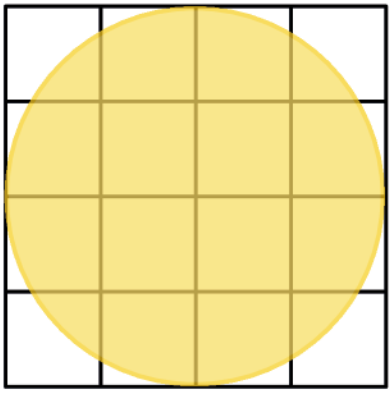


3 units^2

The small square is 2 units^2
The big square is 4 units^2
A good estimate will be between the upper and lower estimates.



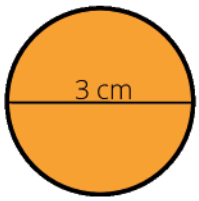
_____



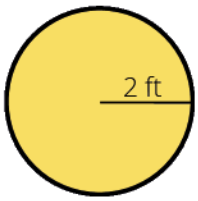
_____

Draw and label the radius, diameter and circumference of the biggest circle.

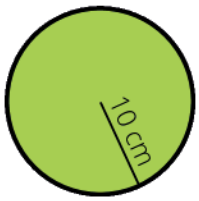
Find the dimensions of each circle based on the given dimension. (not to scale)



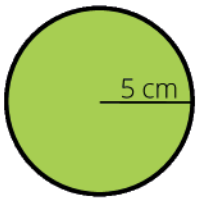
radius _____
diameter _____
circumference _____
area _____



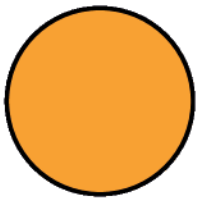
radius _____
diameter _____
circumference _____
area _____



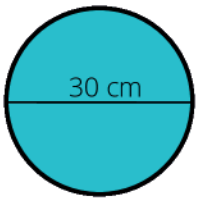
radius _____
diameter _____
circumference _____
area _____



radius _____
diameter _____
circumference _____
area _____

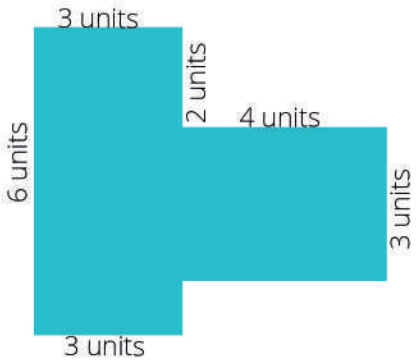


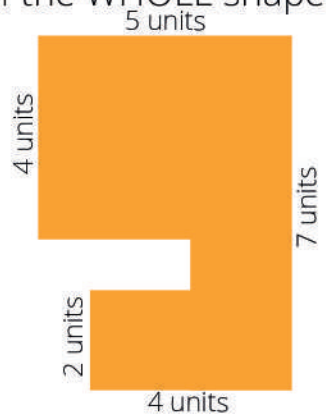
radius _____
diameter _____
circumference 314 cm
area _____



radius _____
diameter _____
circumference _____
area _____

Find the missing dimensions, then divide each shape into two or three rectangles. Find the perimeter and the area of each small rectangle, then add up those areas to find the area of the WHOLE shape. All of the angles are RIGHT ANGLES. (4.50)





_____ (length) X _____ (width) = _____ (area)

_____ (length) X _____ (width) = _____ (area)

perimeter _____ units

area _____ $units^2$

_____ (length) X _____ (width) = _____ (area)

_____ (length) X _____ (width) = _____ (area)

_____ (length) X _____ (width) = _____ (area)

perimeter _____ units

area _____ $units^2$

_____ (length) X _____ (width) = _____ (area)

_____ (length) X _____ (width) = _____ (area)

perimeter _____ units

area _____ $units^2$

Draw lines to match each quadrilateral across all three columns. (4.49)

rectangle

rhombus

trapezoid

square

parallelogram

- Has two pairs of parallel sides, right angles and congruent sides.
- Has two pairs parallel sides, and four right angles.
- Has only one pair of parallel sides.
- A parallelogram with four congruent sides, but it does not have to have 4 right angles.
- Has 2 pairs of parallel sides, opposite each other.

Round each number to the nearest: (4.11)

5012

Ten _____

Hundred _____

Thousand _____

3974

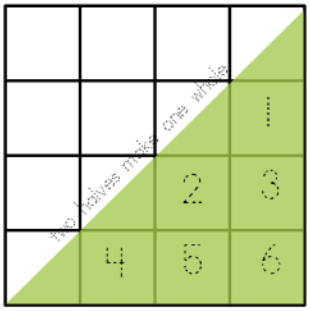
Ten _____

Hundred _____

Thousand _____

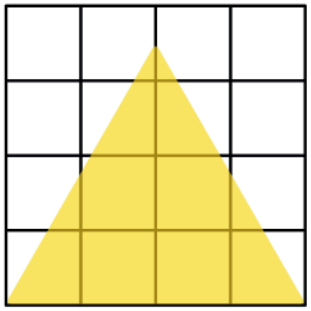
#75 Date _____

Use the grid to estimate the area of each shape. Each square on the grid is one unit squared.

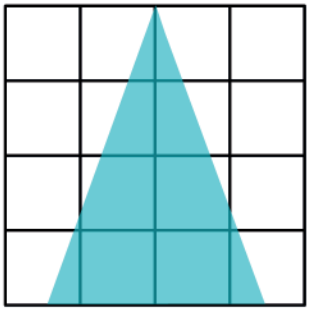


8 units^2

The whole square is 16 units^2
The triangle is half of that.
You can also count the squares and add them up.

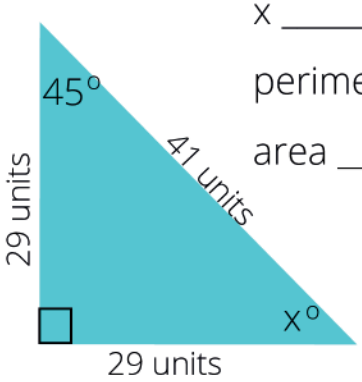


_____



_____

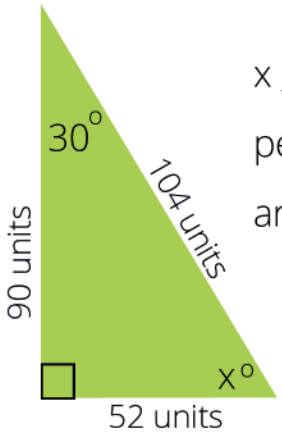
$\text{area}_{\triangle} = \frac{1}{2}bh$ b (base) and h (height) must be perpendicular to each other



x _____

perimeter _____

area _____

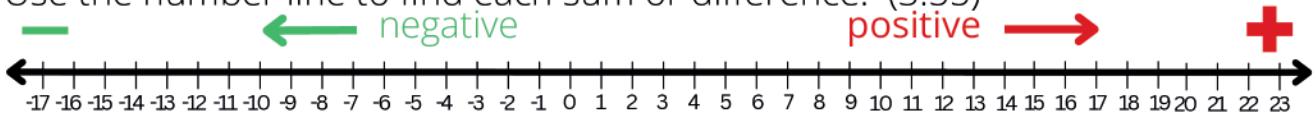


x _____

perimeter _____

area _____

Use the number line to find each sum or difference. (3.55)



4 - 5 = -1

5 - 4 = ____

-4 - 5 = ____

-4 + 5 = ____

-6 + 2 = ____

2 - -6 = ____

-6 - 2 = ____

3 - 9 = ____

12 - 18 = ____

-2 + 6 = ____

-2 + 14 = ____

-2 - 14 = ____

Find the mean, median, mode and range of each set of game scores. (4.55)

Scores	Mean	Median	Mode	Range
4, 9, 7, 7, 3 (3, 4, 7, 7, 9)	6	7	7	6
5, 2, 1, 6, 1				
5, 6, 5, 4, 5				
9, 2, 9, 4, 1				
2, 9, 13, 10, 8, 5, 2				
1, 8, 7, 9, 3, 10, 4				

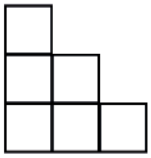
WORD PROBLEMS

Find three times the product of 2 and the square root of 36.

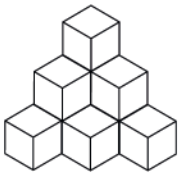
What is half of the product of five and six?

If you can blow up 1 balloon every minute, how balloons can you blow up in two hours?

This solid is made of how many small cubes?



side view



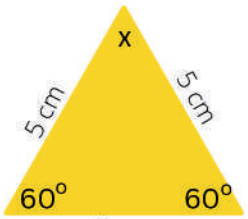
front view

Gramps bought butter for $3.89, chocolate chips for $4.47, eggs for $3.12, flour for $2.75 and sugar for $3.83. He paid 10 percent tax and paid with a $20 bill. What was his change?

Draw a picture to show that the mixed number one and one fourth and the top-heavy fraction, five fourths are equivalent.

#76 Date _____

Find the missing angle, the perimeter & area, then classify each triangle by sides (equilateral, isosceles, scalene) and angles (acute, right, obtuse). Use units.



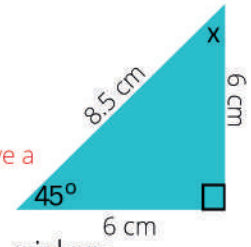
x _____

perimeter _____

area skip area because you don't have a perpendicular height and base

sides: equilateral

angles: acute



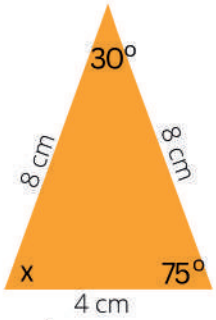
x _____

perimeter _____

area _____

sides: _____

angles: _____



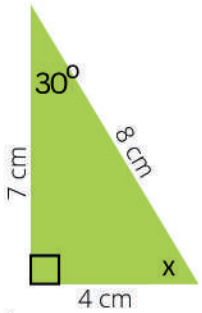
x _____

perimeter _____

area you need a perpendicular height and base to find the area, so skip this one

sides: _____

angles: _____



x _____

perimeter _____

area _____

sides: _____

angles: _____

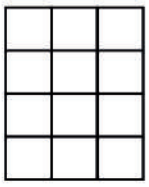
Find the area and perimeter of each shape. (4.50)

3 rows, 4 columns

___ x ___ = ___

perimeter _____

area _____

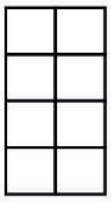


4 rows, 3 columns

___ x ___ = ___

perimeter _____

area _____

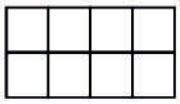


4 rows, 2 columns

___ x ___ = ___

perimeter _____

area _____



2 rows, 4 columns

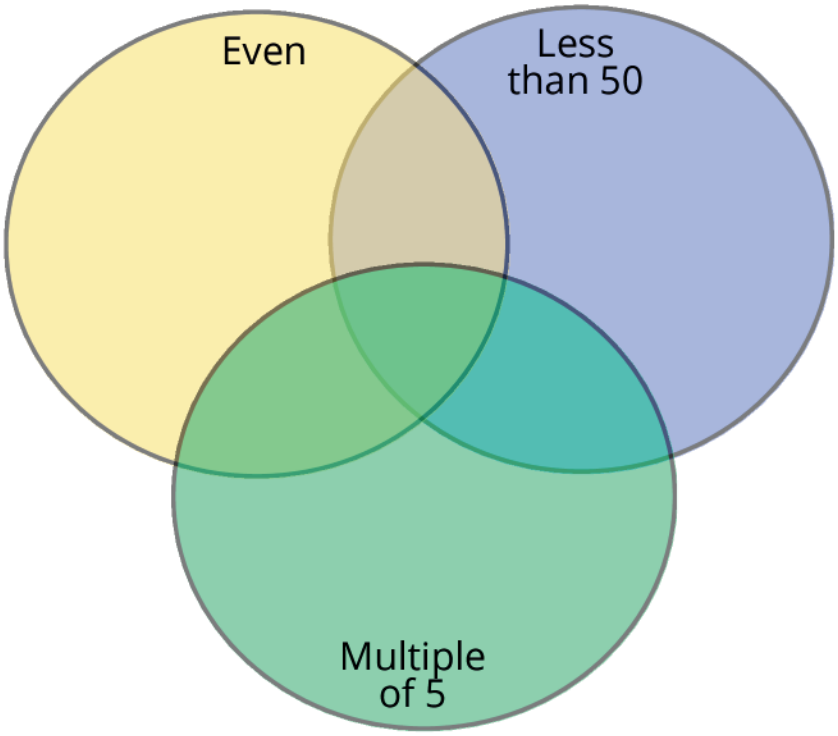
___ x ___ = ___

perimeter _____

area _____

What is the commutative property of multiplication? Circle two examples of it.

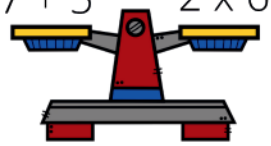
Find the correct space for each number in this Venn diagram. Cross out numbers as you use them. Circle any leftover numbers that don't have fit into the diagram. (3.30)



18	12
45	54
30	25
6	9
52	13
35	36
40	43
20	15
19	65
55	100

Balance these equations. (4.31)

$7 + 5 = 2 \times 6$



$3 \times 6 = 2 \times \_\_\_$

$\_\_\_ \times 8 = 3(4 \times 8)$

$2 + 3^2 = 13 - \_\_\_$

$\_\_\_ \times 4 = 6^2 \div 3$

$7 + \_\_\_ = 3 \times 3$

$5^2 - 5 = 4 \times \_\_\_$

$\sqrt{49} = 35 \div \_\_\_$

$12 \times 6 = \_\_\_ \times 9$

$18 - \_\_\_ = 4^2$

$4(3 + 3) = 8 \times \_\_\_$

$2(2 + 3) = 40 \div \_\_\_$

$4 + 11 = \_\_\_ \times 5$

$48 \div \_\_\_ = \sqrt{36}$

Round each number to the nearest: (4.11)

1213

Ten _____

Hundred _____

Thousand _____

1392

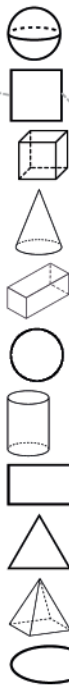
Ten _____

Hundred _____

Thousand _____

#77 Date _____

Draw lines to match each shape to its name and attributes.

Square		12 edges all the same length
Triangle		One vertex, one circular side
Cone		No edges or vertices, 3D
Sphere		8 vertices, only 2 sides are squares
Cuboid		3D with 2 circular ends
Circle		3 sides
Cylinder		4 sides, all the same length
Rectangle		Closed, curved, 2D shape
Pyramid		One vertex, one square side
Oval		No edges or vertices, but not a circle
Cube		4 sides, not the same length

Draw lines to match each quadrilateral to it's most specific name. (4.49)

rectangle square parallelogram rhombus trapezoid

Geometry Riddles. The answer to each riddle is one of the 3D shapes above.

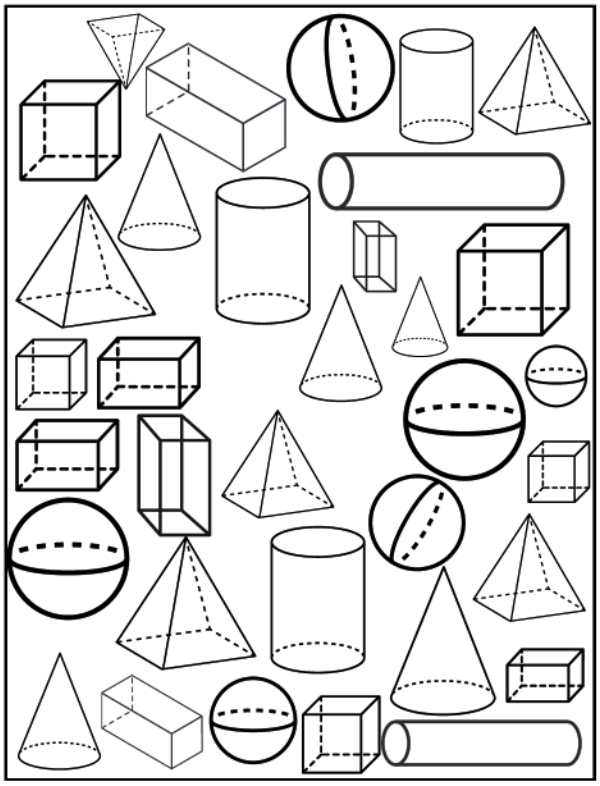
I have no vertices. _____

I have 5 faces and 8 edges. _____

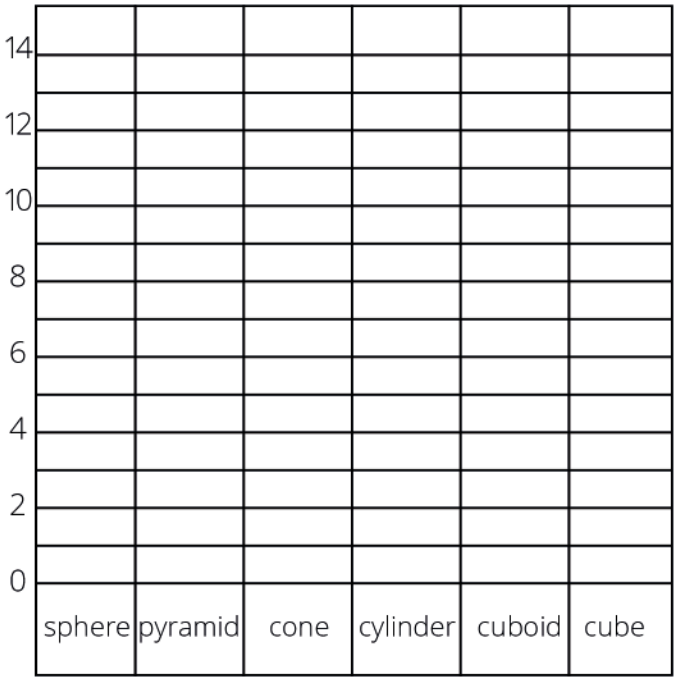
I have 12 edges and 8 vertices. _____

I have 2 circular faces and one rectangular face. _____

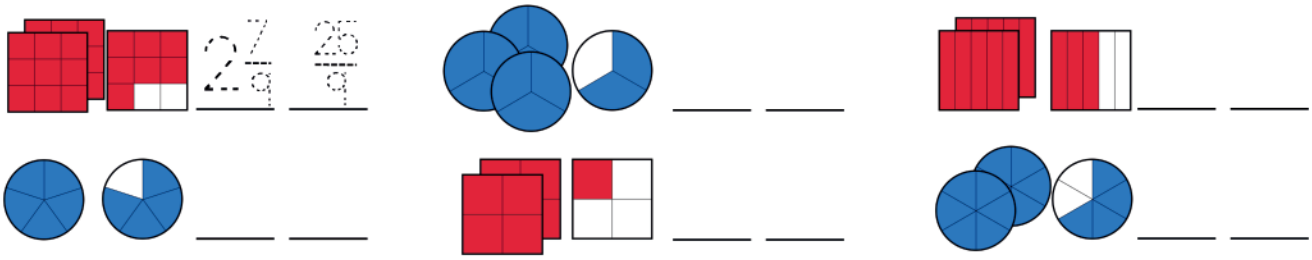
I have one vertex and one circular face. _____



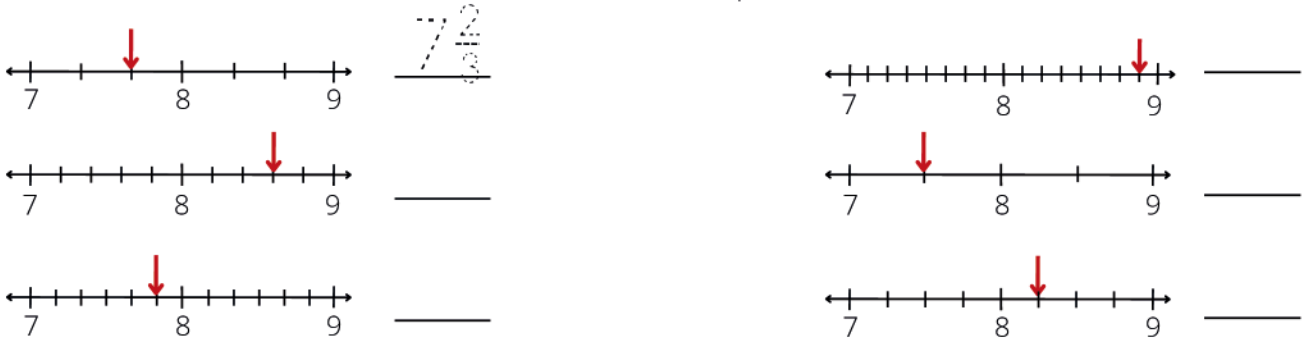
Color one space for each 3D shape to make a bar graph of shapes.



Name these fractions as mixed numbers and improper fractions. (4.25)



To which **mixed number** does each arrow point? (4.24)



#78 Date _____

Roman Numerals. Write the Roman Numeral for each Arabic Numeral.

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

1	I
2	II
3	III
4	IV
5	V
6	VI
7	VII
8	VIII
9	IX
10	X

11	
12	XII
13	
14	
15	
16	
17	
18	
19	
20	

21	
22	
23	
24	
25	
26	
27	
28	
29	XXIX
30	

31	
32	
33	
34	XXXIV
35	
36	
37	
38	XXXVIII
39	
40	

41	
42	
43	
44	XLIV
45	
46	
47	
48	
49	
50	L

Write the Arabic Numeral for each Roman Numeral.

XXXIII _____ XXVIII _____ L _____

XLVIII _____ VIII _____ XI _____

XXIX _____ XXXV _____ XXXXI _____

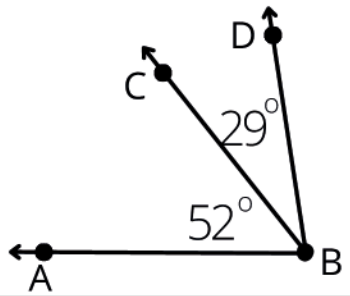
XIX _____ XXIV _____ XXVI _____

WORD PROBLEMS

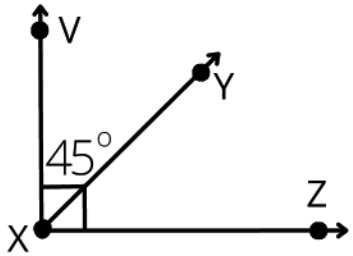
What is the square root of the sum of the fourth multiple of seven and the sixth multiple of six?

What is the sum of one fourth and three fourths?

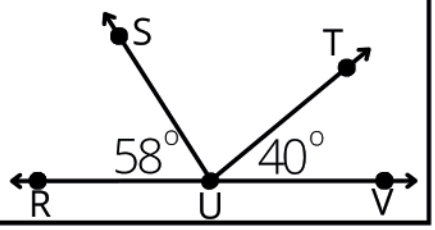
What is the measure of <ABD?



What is the measure of <YXZ?



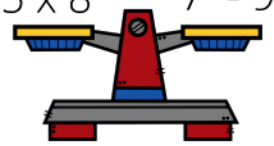
RV is a straight line. What is the measure of <SUT?



Use a protractor to correctly draw each angle measure. (4.48)

90° (right angle) 	45°	30°
22°	170°	15°

Balance these equations. Remember to follow PEMDAS. (3.83)

$5 \times 8 = 7^2 - 9$ 

$8 \times 6 = 4 \times \_\_\_$

$2 + 5 = \sqrt{\_\_\_}$

$4 \times \_\_\_ = 8^2 \div 2$

$\_\_\_ \times 4 = 16 \div 4$

$6^2 \div \_\_\_ = 9 \times 2$

$\sqrt{25} - 5 = 4 \times \_\_\_$

$8 \times 7 = 56 \div \_\_\_$

$9 \times 12 = 10^2 + \_\_\_$

$12 \times \_\_\_ = 4 \times 15$

$5(3 + 5) = 8 \times \_\_\_$

Find the squares. (3.41)

$2^2 = \_\_\_\_$ $6^2 = \_\_\_\_$

$3^2 = \_\_\_\_$ $7^2 = \_\_\_\_$

$4^2 = \_\_\_\_$ $8^2 = \_\_\_\_$

$5^2 = \_\_\_\_$ $9^2 = \_\_\_\_$

Find the positive square roots.

$\sqrt{16} = \_\_\_\_$ $\sqrt{25} = \_\_\_\_$

$\sqrt{81} = \_\_\_\_$ $\sqrt{1} = \_\_\_\_$

$\sqrt{36} = \_\_\_\_$ $\sqrt{4} = \_\_\_\_$

$\sqrt{64} = \_\_\_\_$ $\sqrt{49} = \_\_\_\_$

#79 Date _____

Roman Numerals. Write the Roman Numeral for each Arabic Numeral.

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

1	I
2	II
3	III
4	IV
5	
6	
7	
8	
9	
10	

29	
31	
42	
44	
55	
56	
59	
60	
69	
70	

71	
72	
83	
84	LXXXIV
85	
86	
87	
88	
89	LXXXIX
90	

91	
93	
94	
95	XCV
97	
99	
100	
101	CI
110	
111	

150	
199	
200	
500	
750	DCCL
1000	
2000	
2025	MMXXV
2420	
5000	

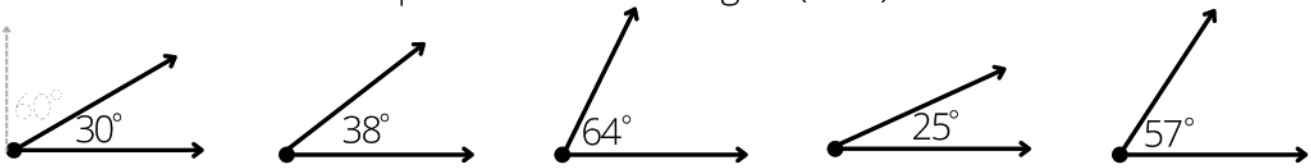
Write the Arabic Numeral for each Roman Numeral.

LXVII	_____	XC	_____	CD	_____
LXIX	_____	XCIX	_____	CM	_____
LXX	_____	C	_____	CMXCIX	_____
LXXX	_____	CCC	_____	MMM	_____

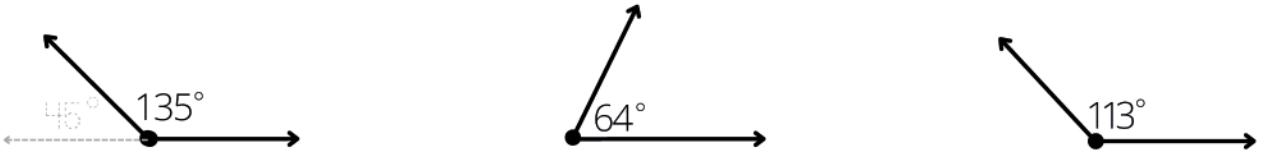
Quadrilaterals (shapes with 4 sides) are special! Draw lines to match columns. (4.49)

rectangle		Has two pairs of parallel sides, right angles and congruent sides. Also a rectangle and a parallelogram.
square		Has two pairs parallel sides, and four right angles. Also a parallelogram.
parallelogram		A parallelogram with four congruent sides, but it does not have to have 4 right angles.
rhombus		Has 2 pairs of parallel sides, opposite each other.
trapezoid		Has one pair of parallel sides.

Draw and label the complement of each angle. (4.71)



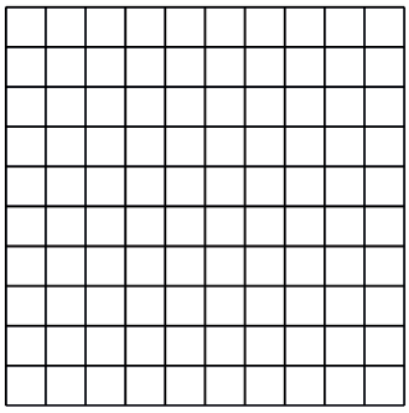
Draw and label the supplement of each angle.



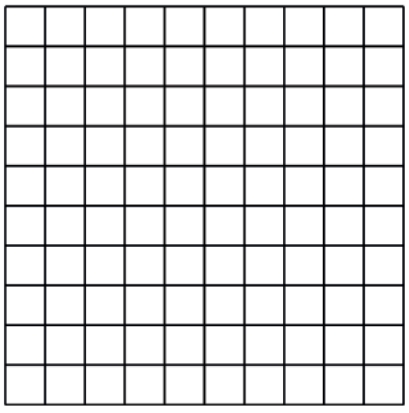
If you pay $9.00 each week for karate lessons, how much do you pay each year? 	If you can pack a dozen packages in one hour, how many packages can you pack in 5 hours? 
Draw a roll of paper towels and a baseball. What is the name of each shape?	Draw a picture to help you solve this problem. The town of Fairview is located between Jackson and Spring City. It is 60 miles from Jackson to Fairview. It is 89 miles from Jackson to Spring City. How far is it from Fairview to Spring City?

Draw rectangles with the following areas: (4.50)

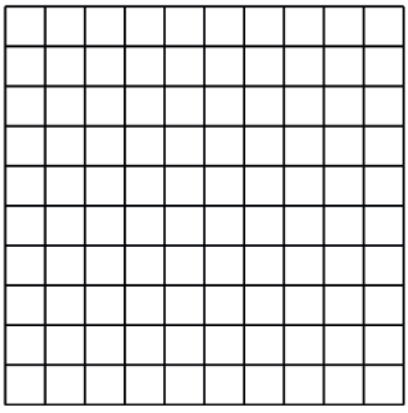
20 units^2



36 units^2



24 units^2

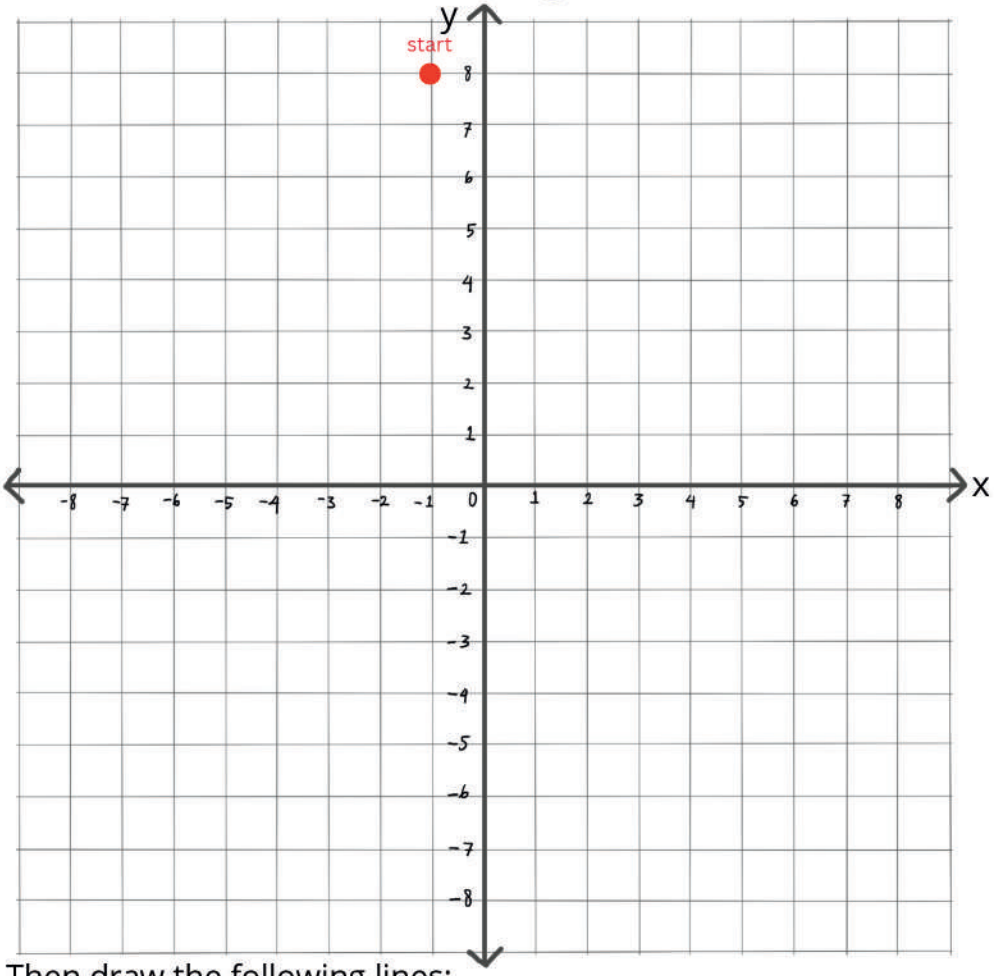


Now draw a diagonal line across each rectangle, dividing it into TWO triangles. What is the area of each triangle?

_____ units^2 _____ units^2 _____ units^2

#80 Date _____

Plot each set of points (x, y) to draw a picture. Start at (-1, 8) and keep your pencil on the paper as you move to each of the points in the list. Complete the list on the left first, then move to the list on the right.

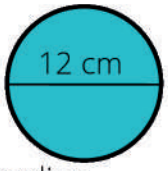


(1, 8)	(-1, -2)
(3, 7)	(-2, -3)
(4, 8)	(-2, -4)
(6, 9)	(0, -5)
(8, 8)	(0, -6)
(9, 7)	(-2, -7)
(9, 4)	(-4, -7)
(7, 1)	(-5, -6)
(7, -2)	(-5, -5)
(6, -4)	(-6, -4)
(5, -5)	(-7, -2)
(5, -6)	(-7, 1)
(4, -7)	(-9, 4)
(2, -7)	(-9, 7)
(0, -6)	(-8, 8)
(0, -5)	(-6, 9)
(2, -4)	(-4, 8)
(2, -3)	(-3, 7)
(1, -2)	(-1, 8)

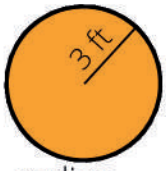
Then draw the following lines:

1. (6, 6) to (7, 1)
2. (3, -1) to (5, -4) to (5, -5)
3. (2, -7) to (1, -8) to (-1, -8) to (-2, -7)
4. (2, 3) to (3, 3) to (4, 2) to (4, 1) to (3, 0) to (2, 0) to (1, 1) to (1, 2) to (2, 3)
5. (-3, 3) to (-2, 3) to (-1, 2) to (-1, 1) to (-2, 0) to (-3, 0) to (-4, 1) to (-4, 2) to (-3, 3)
6. (3, -7) to (1, -9) to (-1, -9) to (-3, -7)
7. (-3, -1) to (-5, -4) to (-5, -5)
8. (-6, 6) to (-7, 1)

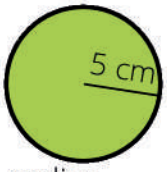
Find the dimensions of each circle based on the given dimension. (not to scale) (4.74)



radius _____
diameter _____
circumference _____
area _____



radius _____
diameter _____
circumference _____
area _____



radius _____
diameter _____
circumference _____
area _____

Complete the charts. (4.78)

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Write the Arabic Number for each Roman Numeral.

XXIX _____

LXIV _____

LXXIX _____

XXXII _____

XXXIX _____

XLV _____

XLVI _____

XCIX _____

D _____

CD _____

LXXIV _____

M _____

CM _____

MCXI _____

The operators are missing! Insert the correct operator (+, -, x, ÷) in each yellow circle to make the number sentence true. All answers have been simplified. (4.20 - 4.23)

$\frac{2}{3} \times \frac{1}{4} = \frac{\cancel{2}^{1}}{\cancel{12}_{6}}$ $\quad \frac{1}{4} \bigcirc \frac{3}{4} = \frac{3}{16}$ $\quad \frac{2}{3} \bigcirc \frac{1}{4} = \frac{5}{12}$ $\quad \frac{1}{2} \bigcirc \frac{1}{3} = \frac{1}{6}$

$\frac{1}{2} \bigcirc \frac{2}{5} = \frac{\cancel{2}^{1}}{\cancel{10}_{5}}$ $\quad \frac{1}{6} \bigcirc \frac{1}{3} = \frac{1}{2}$ $\quad \frac{1}{2} \bigcirc \frac{1}{4} = \frac{3}{4}$ $\quad \frac{1}{4} \bigcirc \frac{3}{4} = \frac{1}{3}$

Draw rectangles with the following areas: (4.50)

16 units^2

40 units^2

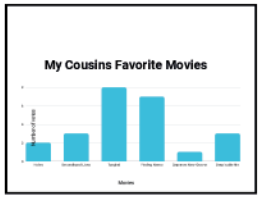
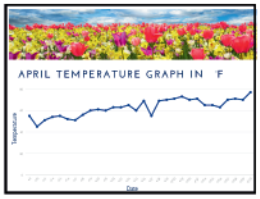
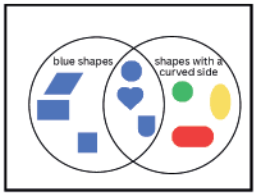
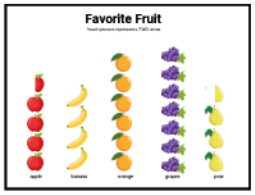
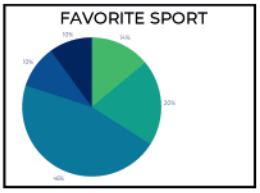
18 units^2

Now draw a diagonal line across each rectangle, dividing it into TWO triangles. Color one of them. What is the area of each triangle?

_____ units^2 _____ units^2 _____ units^2

#81 Date _____

Draw lines to match each data set to the best type of graph.

BAR GRAPH	LINE GRAPH	VENN DIAGRAM	PICTOGRAPH	PIE CHART
				
Makes it easy to compare DISCRETE data between different groups, using bars.	Represents continuous data, using lines to connect individual data points.	Visual organizer of overlapping circles that explores the relationship between a set of different things.	A type of bar graph, pictographs are pictorial representations of data using images, icons, or symbols.	Represents data as a circle. The slices of pie show the size of the data relative to each other.

Graph your growth over the year.

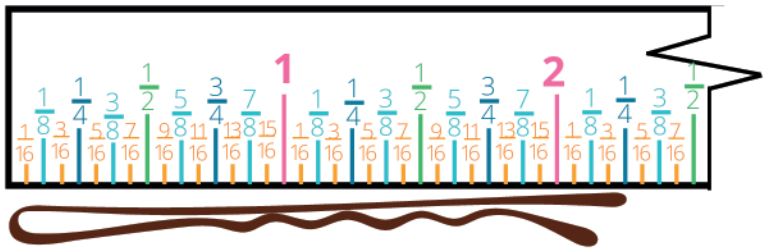
Your family is one whole group. Graph your family members favorite ice cream flavors as a percentage of the whole.

Compare the similarities and differences of dogs and cats.

Graph the hair colors of everyone in your neighborhood.

Use pictures to represent your friend's favorite pets.

Another word for information is _____



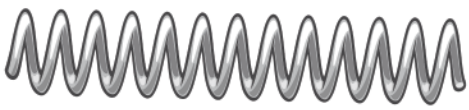
How long is this bobby pin?

_____ in

Use a ruler to measure each item in Customary and Metric units. (4.65)

_____ cm _____ in

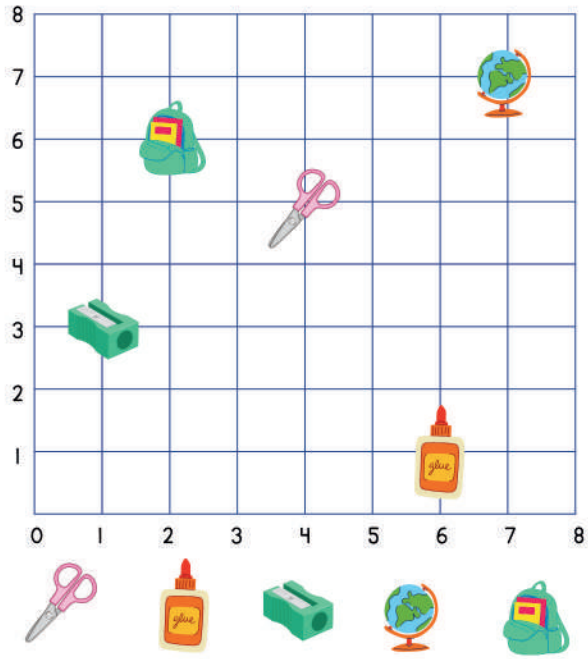
_____ cm _____ in



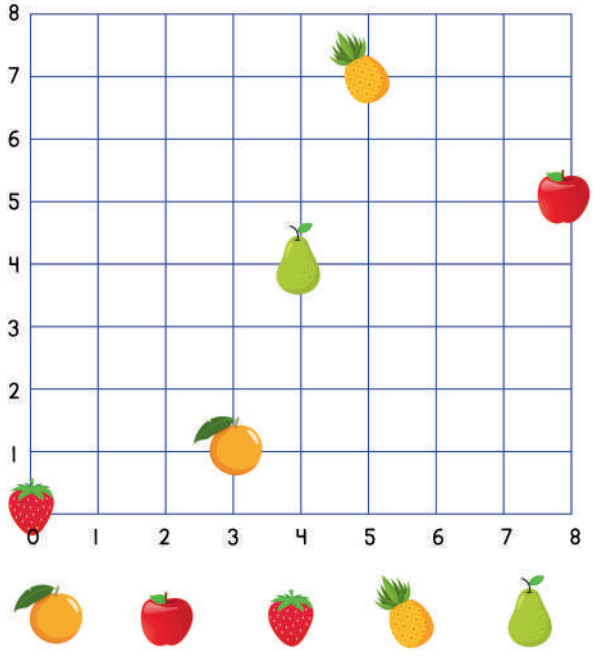
_____ cm _____ in

_____ cm _____ in

Locate each object and write the coordinates of its point. (x, y) (4.80)



(4,6) (,) (,) (,) (,)

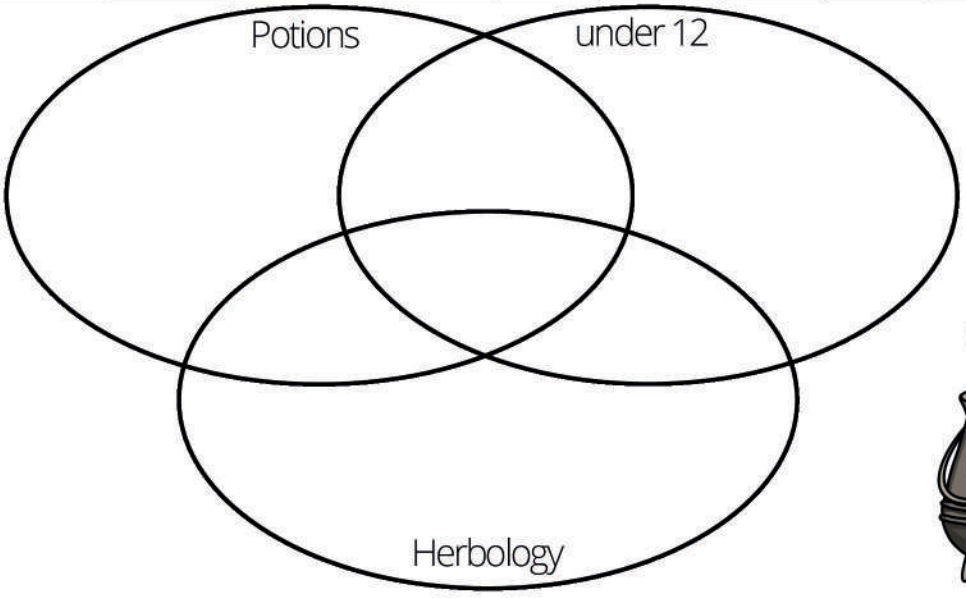


(,) (,) (,) (,) (,)

What are the coordinates of the origin?

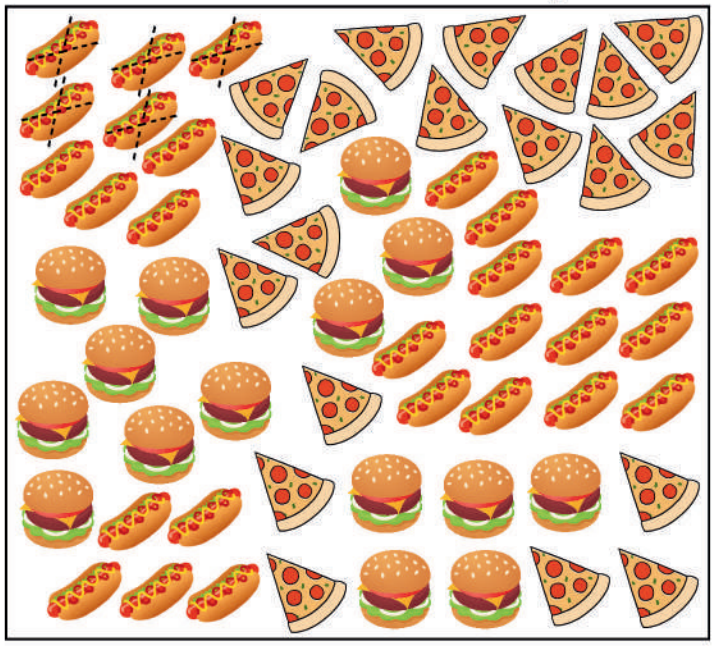
Use this chart to fill out both of the Venn Diagrams below with a few Hogwarts students' favorite classes. (3.30)

name	Harry	Ron	Hermione	Ginny	Fred	George	Luna	Neville	Draco	Cho
age	11	11	11	9	15	15	11	11	12	11
Potions	yes	yes	yes	no	yes	no	no	yes	yes	no
Herbology	no	no	yes	yes	no	yes	yes	yes	yes	no

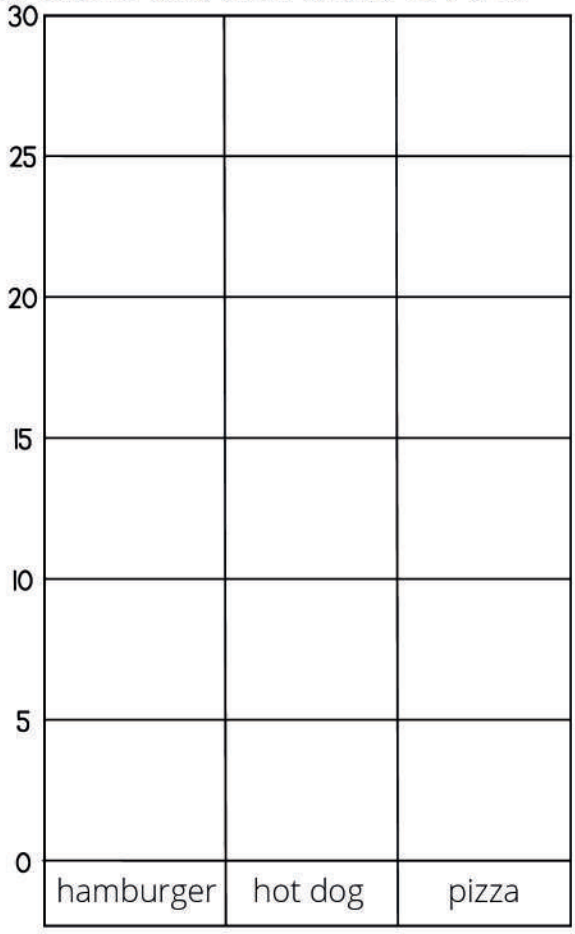


#82 Date _____

Build a FREQUENCY TABLE of todays' food truck orders and then a BAR GRAPH.



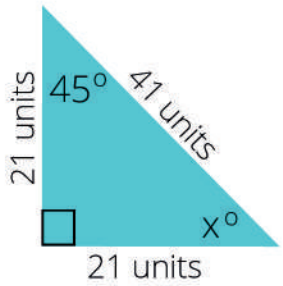
hamburger	
hot dog	
pizza	



Another word for information is _____

$\text{area}_{\triangle} = \frac{1}{2}bh$ (4.75)

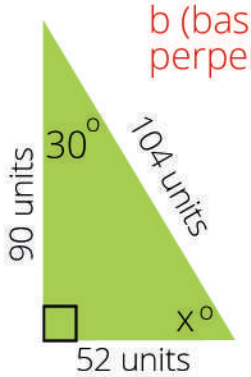
b (base) and h (height) must be perpendicular to each other



x _____

perimeter _____

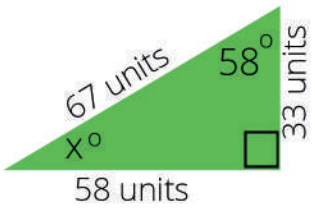
area _____



x _____

perimeter _____

area _____

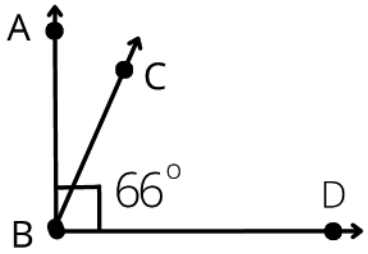


x _____

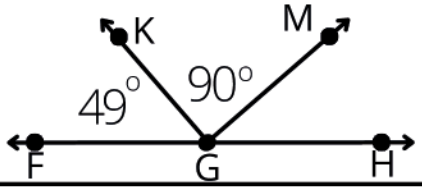
perimeter _____

area _____

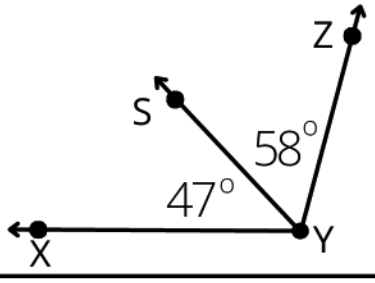
What is the measure of <ABC?



RV is a straight line. What is the measure of <MGH?

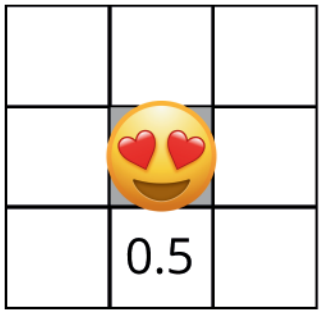


What is the measure of <XYZ?



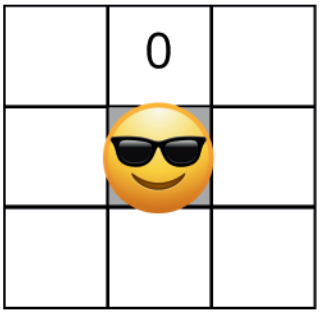
The numbers in each row and column should add to the specified total. Note that there are multiple solutions for each puzzle. (4.39)

0.2, 0.3, 0.4, 0.6, 0.7, 0.8, 0.9



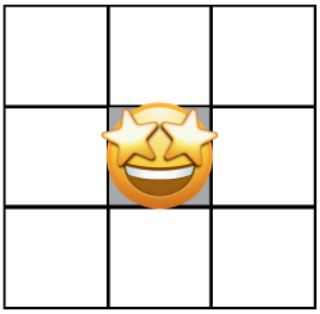
All rows and columns should add up to 1.8

0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8



All rows and columns should add up to 1.2

0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9



All rows and columns should add up to 1.5

Your mom bought a pizza. It was cut into eighths. You and two of your brothers ate one fourth each. How many sliced did you eat? How many slices are left for your sister?

Find a common denominator, then add and subtract the fractions. (4.20)

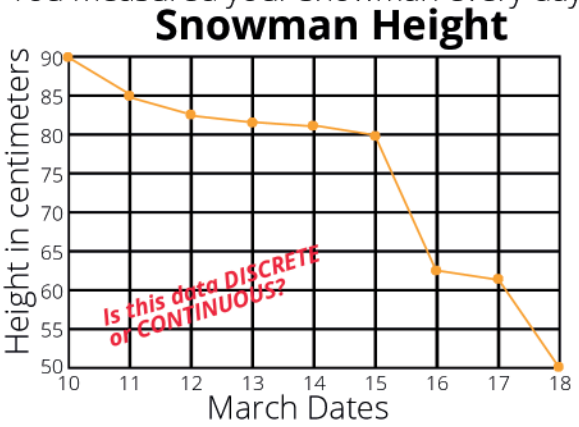
$\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$ $\quad \frac{2}{3} - \frac{3}{6} =$ $\quad \frac{1}{3} + \frac{1}{4} =$ $\quad \frac{1}{4} + \frac{5}{8} =$

$\frac{2}{2} - \frac{1}{3} =$ $\quad \frac{1}{2} + \frac{3}{6} =$ $\quad \frac{1}{3} - \frac{1}{12} =$ $\quad \frac{5}{6} - \frac{3}{12} =$

$\frac{1}{2} + \frac{1}{3} =$ $\quad \frac{3}{4} - \frac{3}{6} =$ $\quad \frac{7}{8} - \frac{1}{2} =$ $\quad \frac{3}{4} - \frac{3}{12} =$

#83 Date _____

You measured your snowman every day at noon.



What is our height scale? _____

How tall is your snowman March 10? _____

Which date was probably the warmest? _____

How do you know? _____

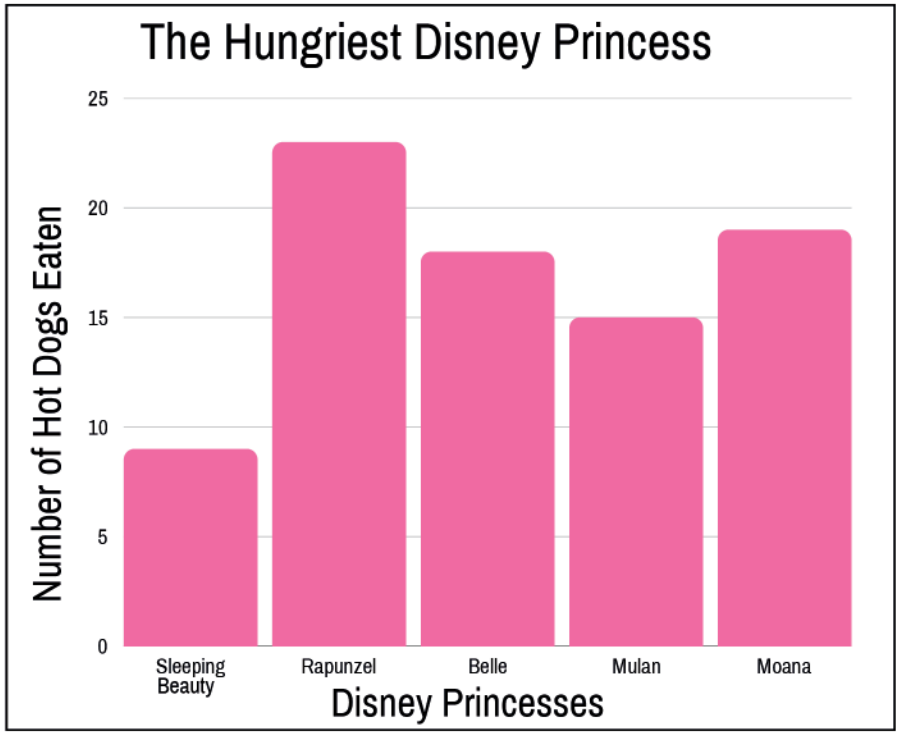
When was it the coldest? _____

Why did I use a LINE GRAPH to portray height? _____

Why doesn't the line ever increase? _____

How much did your snowman shrink by March 18? _____

The Disney princesses had an eating contest. They graph below shows how many hot dogs each princess ate in ten minutes.



Sleeping Beauty

Rapunzel

Belle

Mulan

Moana

If each hot dog and bun has 215 calories, how many calories did Mulan eat?

If each hot dog and bun cost 65 cents, how much did the event organizer pay for the food that was eaten?

Do you think the princesses ate their dinner after the event?

Is this data DISCRETE or CONTINUOUS?

Who ate the most hot dogs? _____

Who ate the fewest? _____

How many MORE hot dogs did Rapunzel eat than Moana? _____

How many hot dogs did all of the princesses eat together? _____

Write operators (x, ÷, +, -) in all of the empty squares to make each number sentence true. Remember to apply the Order of Operations, PEMDAS. (3.83)

8	÷	2	+	1	=	5
1		3		2	=	1
7		6		9	=	4
=		=		=		=
1		1		8	=	8

2	-	2	x	1	=	0
5		0		3	=	3
6		3		7	=	-5
=		=		=		=
1		2		-4	=	-2

5	-	1	+	3	=	7
3		4		6	=	2
2		2		4	=	0
=		=		=		=
4		2		1	=	9

Solve using the Order of Operations (PEMDAS). (3.83)

$2^2 - \sqrt{9} =$ _____

$18 \div \sqrt{81} =$ _____

$2(5 - 1) \div 2 =$ _____

$6 \times 3 - 3 \times 4 =$ _____

$12 - 6 \times 2 =$ _____

$6^2 \div 9 =$ _____

$3^2 - \sqrt{49} =$ _____

$2 + 4 \times 12 =$ _____

$7(2 \times 4) =$ _____

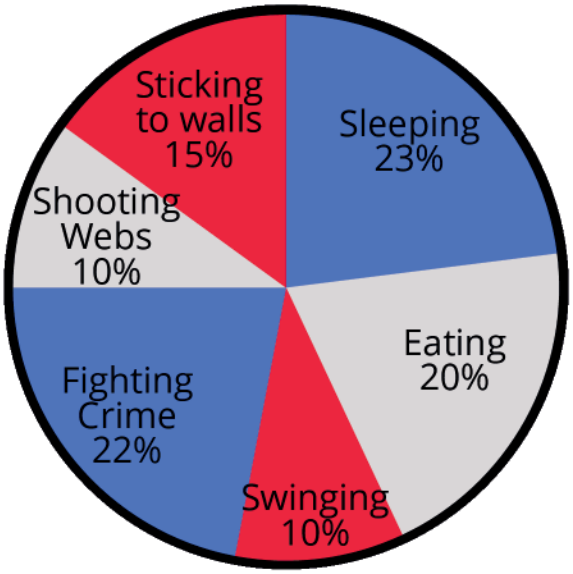
$4(3 + 9) =$ _____

Find the mean, median, mode and range of each set of game scores. (4.55)

Scores	Mean	Median	Mode	Range
2, 5, 8, 7, 3 2, 3, 5, 7, 8	5	5		6
8, 8, 9, 4, 1				
6, 7, 9, 4, 9				
11, 8, 2, 9, 3, 2, 7				
13, 8, 7, 9, 5, 10, 4				

#84 Date _____

Each WHOLE day is 24 hours. This is how Spiderman spent his day.



How did he spend most of his time?

_____

How did he spend least of his time?

_____

On which two activities did he spend an equal amount of time?

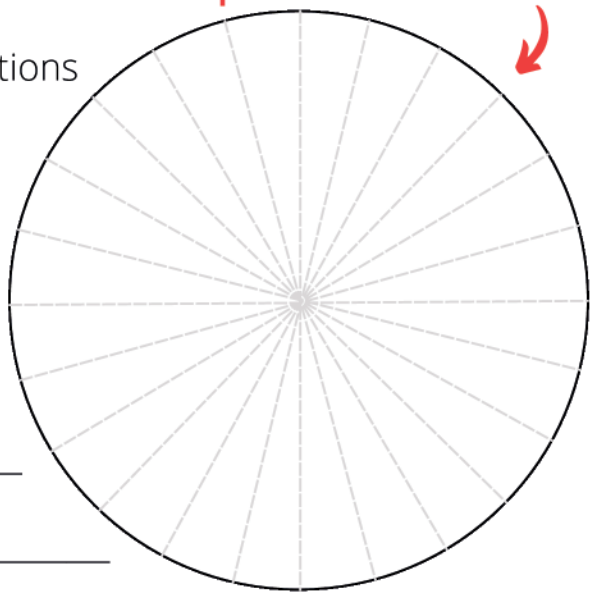
_____

Why do all of the activities add up to 100%?

_____

Another word for information is _____

What does YOUR daily schedule look like? The pie chart below has 24 sections, 1 section per hour. Label your sections with fractions, not percentages. So if you sleep for 8 hours, 8 sections would be sleeping and the fraction would be 8/24. Simplify that to 1/3. Then write some questions below for your mom or dad to answer.



_____

_____

_____

_____

_____

_____

_____

_____

Complete this chart. Write fractions in their simplest form. Round decimals to the **hundredths place** and percents to the **whole number**. (4.41)

Is the denominator a factor of 10 or 100?

Yes use the butterfly method No divide the numerator by the denominator

1x100=100 4x?=100

$\frac{1}{4} = \frac{?}{100}$

1x10=10 5x?=10

$\frac{1}{5} = \frac{?}{10}$

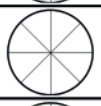
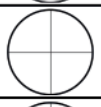
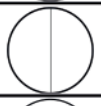
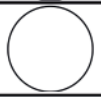
1x10=10 2x?=10

$\frac{1}{2} = \frac{?}{10}$

round to the hundredths place. 5 or more let the circled digit soar, 4 or less let the circled digit rest

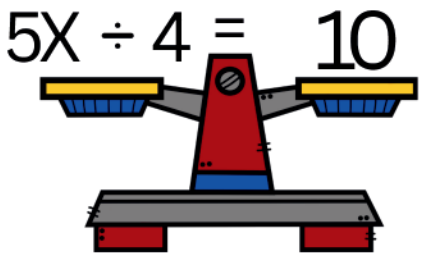
$12\overline{)1.0000}$

$8\overline{)1.000}$ $6\overline{)1.000}$ $3\overline{)1.000}$

Visual Fraction	Numerical Fraction	Decimal	Percent
	$\frac{1}{12}$	0.08	8 %
	$\frac{1}{10}$		
	$\frac{1}{8}$		
	$\frac{1}{6}$		
	$\frac{1}{5}$		
	$\frac{1}{4}$		
	$\frac{1}{3}$		
	$\frac{1}{2}$		
	1		

(get X by itself!)

Solve for x: (4.31)



Undo everything that has been done to X.

Step 1: multiply both sides of the equation by 4 to UNDO the division.

Step 2: divide both sides by 5 to UNDO the multiplication.

Step 3: Check your answer by replacing X with the answer.

$5X \div 4 = 10$

x4 x4

$5X = 40$

5 5

$X = 8$

$5(8) \div 4 = 10$ ✓ true

Solve for the variable:

$8 + X = 14$ X = _____

$36 - 2X = 18$ X = _____

$(3 + 5) \div X = 4$ X = _____

$X(5 + 2) = 7^2$ X = _____

$8(9 - X) - 6 = 50$ X = _____

$2(X + 3) \div 2 = 7$ X = _____

#85 Date _____

Your basketball team played 30 games last season. Here are your scores:

48, 42, 42, 68, 48, 57, 51, 64, 55, 60, 65, 45, 46, 52, 44, 49, 56, 60, 58, 64, 65, 63, 53, 58, 55, 66, 50, 60, 57, 59

lowest score _____

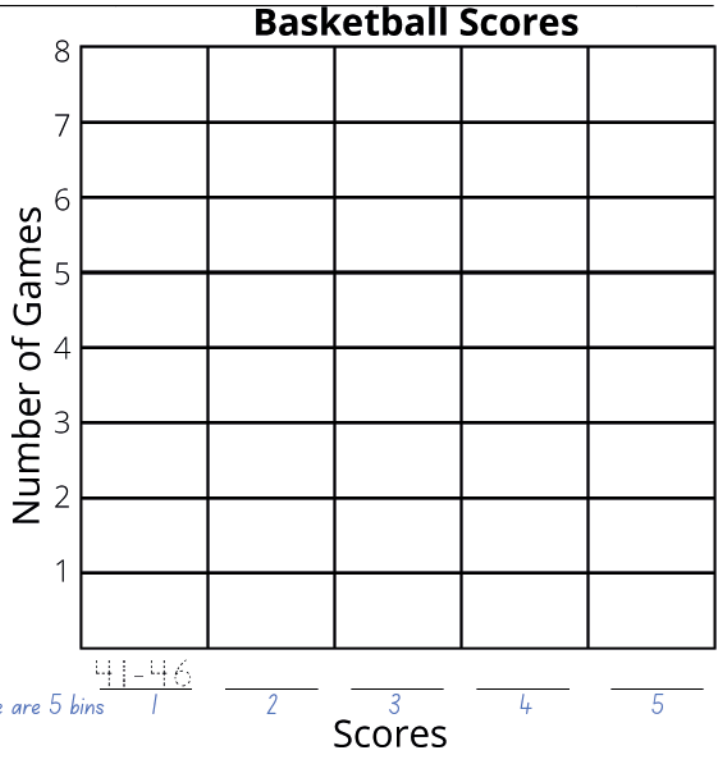
highest score _____

range _____

bin size _____
range divide by number of bins; round up to the nearest whole number

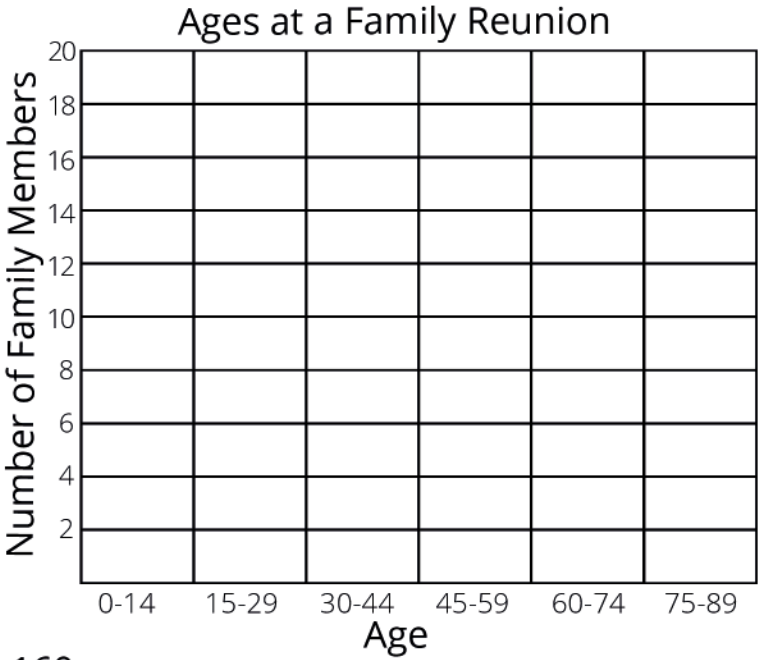
label the bins
start at 41

color bars, each a different color, to represent the number of games in each bin.



You asked everyone at your family reunion their ages and recorded them on this frequency table. Build a histogram from the frequency table.

0-14	𝍸 𝍸 𝍸 𝍸
15-29	𝍸 𝍸 𝍸 𝍸
30-44	𝍸 𝍸 𝍸
45-59	𝍸 𝍸 IIII
60-74	𝍸 𝍸 III
75-89	𝍸 II



How many people attended the reunion?

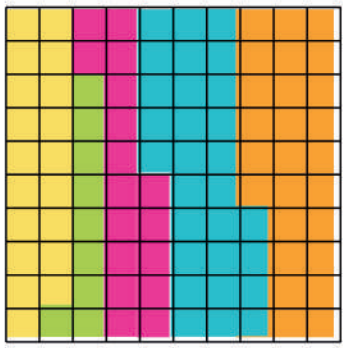
Which age group has the fewest people?

Which age group(s) have the most people?

How many family members are age 30 or older?

How many family members are age 29 or younger?

This grid has 100 squares. What percentage is each color? (4.40)



percent	fraction	decimal	percent	fraction	decimal
19 %	$\frac{19}{100}$	0.19			

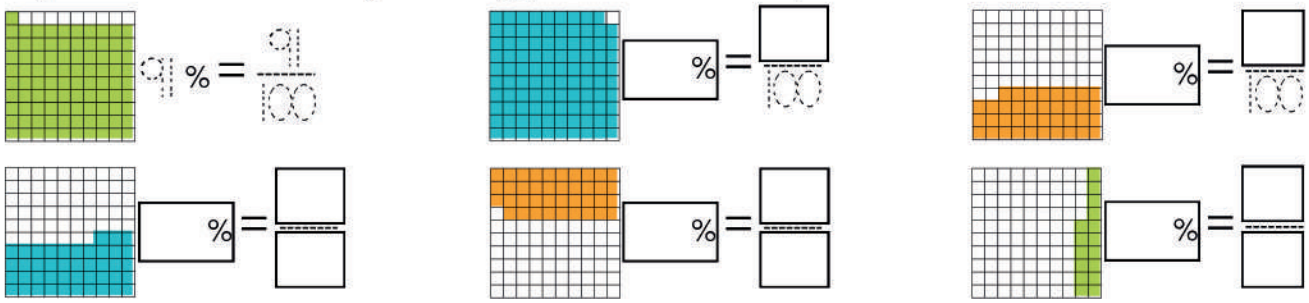
Add all of the percentages.

19 + ■ + ■ + ■ + ■ =

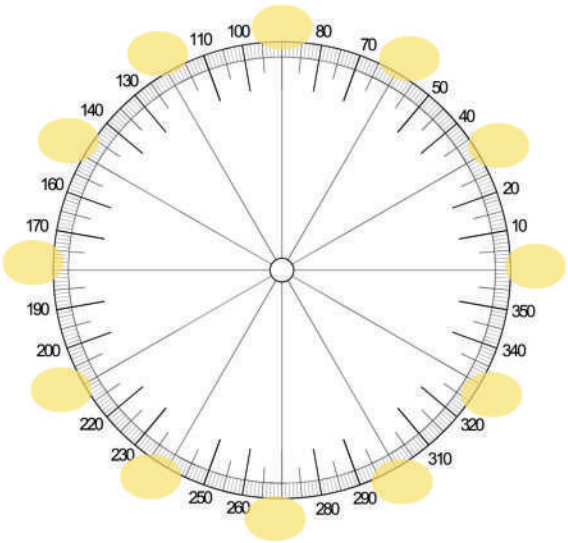
Do percentages always add up to 100%? _____

Why? _____

Each block has 100 squares. Color the squares to illustrate each percentage equation and fill in any missing parts of each equation. (4.40)



Use your reference pages to fill in the missing angles (the yellow ovals). (4.48)



Draw:

Right Angle	Line Segment
Reflex Angle	Ray
Obtuse Angle	Line
Straight Angle	Acute Angle

LEVEL 4 GRADUATE

YOU DID IT!

_____

name

Nothing worth learning is easy. You have learned some incredible skills and your hard work has paid off! Congratulations on your excellent achievement!

_____

parent/educator

Amy Beck

Amy Beck, We Play Math