Vocabulary

Place Value: the basis of our entire number system, in which the position of a digit in a number determines its value. For example, the number 2 has a different value in each of the following numbers: 25, 2, 238. In the number 25, the 2 represents 2 TENS, the number 2 represents 2 ONES and in the number 238, the 2 represents 2 HUNDREDS.

Ordinal Numbers: a number defining a thing's position in a series, such as “first,” “second,” or “third.”

Commutative Property: applies to both addition and multiplication. You may add the addends in any order and the sum will be the same. You may multiply numbers together in any order and the product will be the same.

Product: the answer to a multiplication problem.

Factor: the numbers being multiplied.

Quotient: the answer to a division problem.

Dividend: the number being divided.

Divisor: the number by which we divide the dividend.

Increment: to add a fixed amount to a number.

Decrement: to subtract a fixed amount from a number.

Congruent: congruent shapes are the same size and shape, congruent lines are the same length.

Horizontal: line that is always parallel to the horizon or the x-axis.

Vertical: lines drawn from top to bottom.

Oblique: in between horizontal and vertical.

Adjacent lines: next to each other.

Adjacent angles: two angles are adjacent if they have a common side and a common vertex.

Parallel lines: always the same distance apart and never touching.

Perpendicular lines: cross each other at 90 degrees forming a right angle.

Right angle: a 90 degree angle.

Acute angle: smaller than 90 degrees.

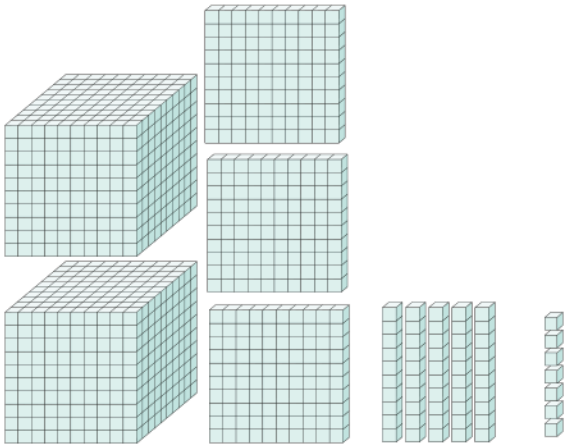
Obtuse angle: between 90 degrees and 180 degrees.

Straight angle: 180 degrees.

Reflex angle: between 180 degrees and 360 degrees.

Place Value

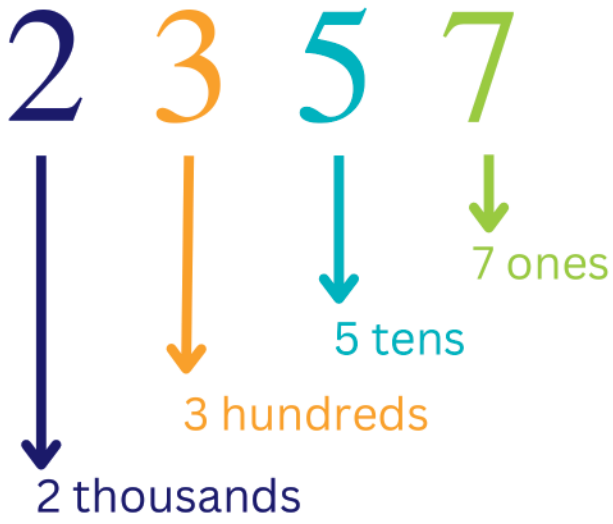
Base Ten blocks:



Standard Form: 2357

Word Form:
two thousand three hundred fifty-seven

Expanded Form:
(2 x 1000) + (3 x 100) + (5 x 10) + (7 x 1)



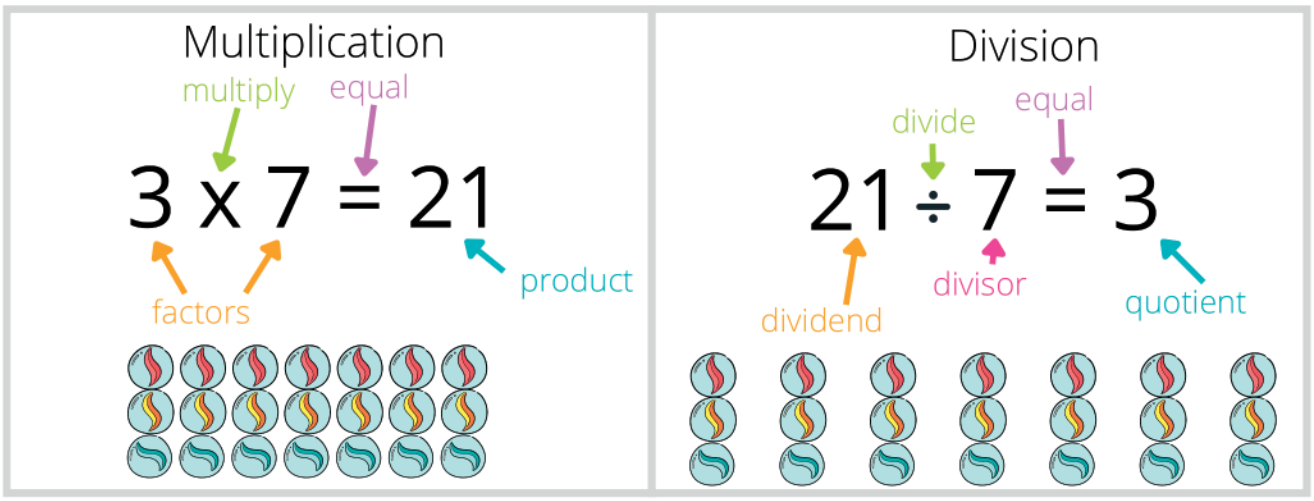
Addition/Subtraction Algorithm:

1. Stack the numbers, making sure they are lined up by place value.
2. Add/subtract the smallest place value. (regroup if necessary)
3. Add/subtract the next smallest place value column. (regroup if necessary)
4. Continue adding/subtracting columns from smallest place value to largest, regrouping where necessary.

Naming an Array: we always CALL arrays by the number of ROWS by the number of COLUMNS.

3 x 4 = 12
rows columns stars

Multiplication & Division Terminology



Math Operators keyword list:

+

- add
- altogether
- both
- combine
- in all
- increase
- increased by
- larger
- larger than
- longer
- longer than
- more
- more than
- perimeter
- plus
- sum
- together
- total

−

- subtract
- minus
- take away
- less
- less than
- change
- decreased
- difference
- fewer
- gave away
- How many more...?
- How many less...?
- left
- left over
- remain
- shorter than
- smaller than

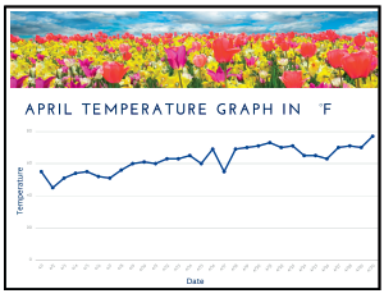
x

- area
- cubed
- double
- each
- groups
- per
- product
- quadruple
- rows
- squared
- times
- triple

÷

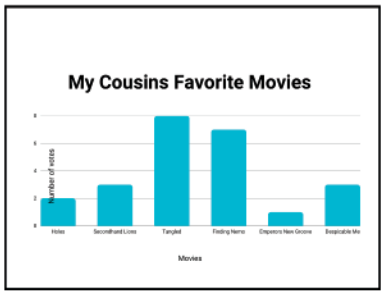
- average
- divide
- each
- equal group
- fourth
- half
- quarter
- quotient
- ratio
- share
- separate
- split
- third

LINE GRAPH



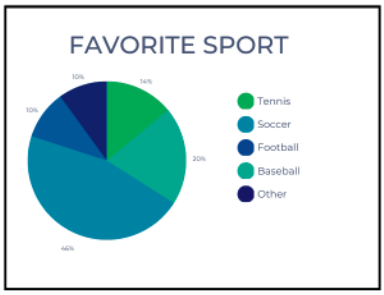
Represents continuous data, using lines to connect individual data points.

BAR GRAPH



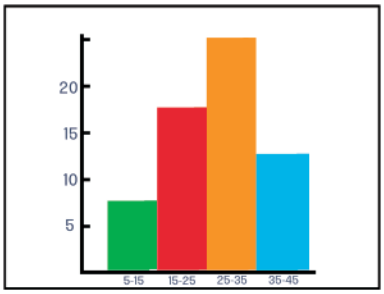
Makes it easy to compare DISCRETE data between different groups, using bars.

PIE CHART



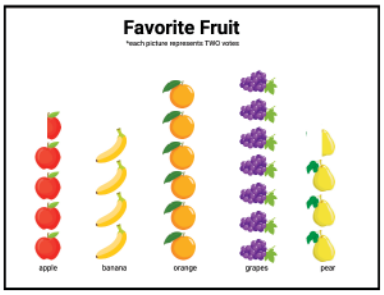
Represents data as a circle. The slices of pie show the size of the data relative to each other.

HISTOGRAM



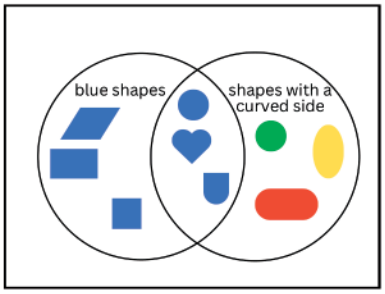
A type of bar graph, histograms are used to represent frequency distributions.

PICTOGRAPH



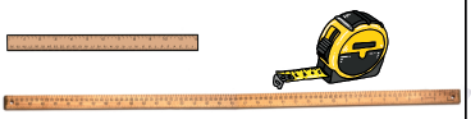
A type of bar graph, pictographs are pictorial representations of data using images, icons, or symbols.

VENN DIAGRAM



Visual organizer of overlapping circles that explores the relationship between a set of different things.

Measurement Chart:

When measuring:	Tools	Customary Units	Metric Units
Capacity (the amount something can hold)		cup, pint, quart, gallon	Liter, milliliter
Temperature		°F	°C
Length		inches, yards, feet, miles	millimeters, centimeters, meters, kilometers
Weight		pounds, ounces	grams, kilograms

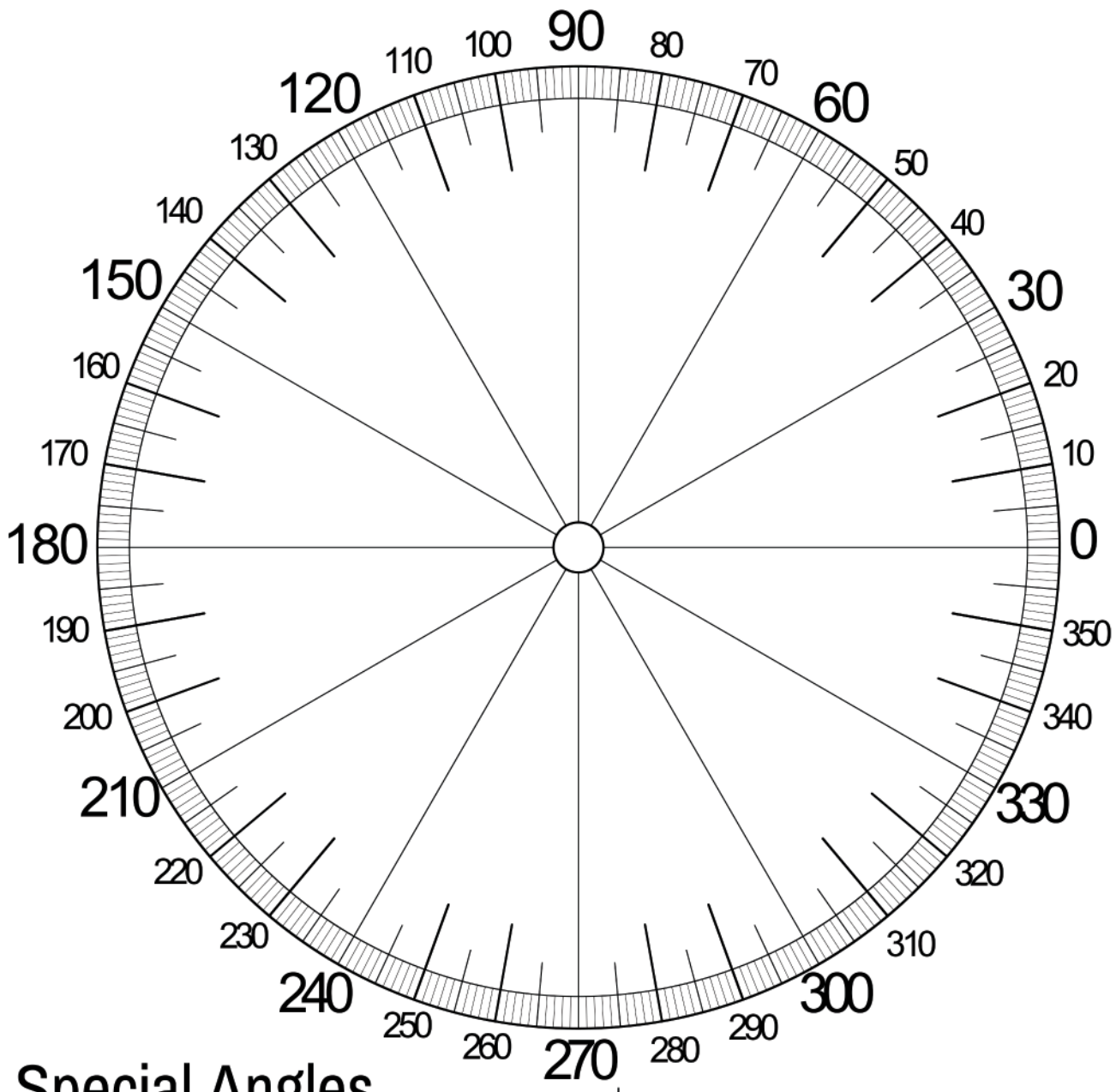
Approximate Measurements:

Metric Capacity:

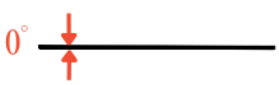
- milliliter (mL) - about 20 drops of water 
- liter (L) - about half of a family-sized (2L) bottle of soda
- 1000 mL = 1 L

1L 2L

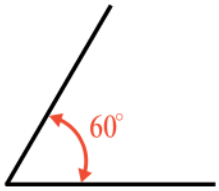
Customary		Metric
1 Tablespoon	3 teaspoons	14.8 milliliters
1 fluid ounce	2 Tablespoons	29.6 milliliters
1 cup	8 fluid ounces	236.6 milliliters
1 pint	2 cups	473.2 milliliters
1 quart	2 pints	946.4 milliliters
1 quart	4 cups	946.4 milliliters
1 gallon	4 quarts	3.79 liters
1 gallon	16 cups	3.79 liters
1 gallon = 4 quarts = 16 cups = 128 fluid ounces		



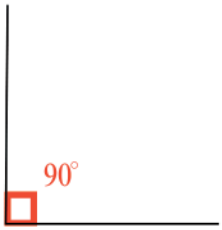
Special Angles



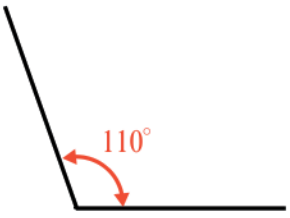
0 degrees



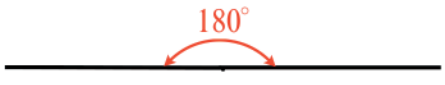
Acute Angles are less than 90 degrees



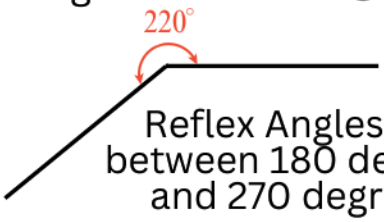
Right Angles are 90 degrees



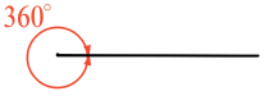
Obtuse Angles are larger than 90 degrees



Straight Angles are 180 degrees



Reflex Angles are between 180 degrees and 270 degrees



360 degrees is one full revolution