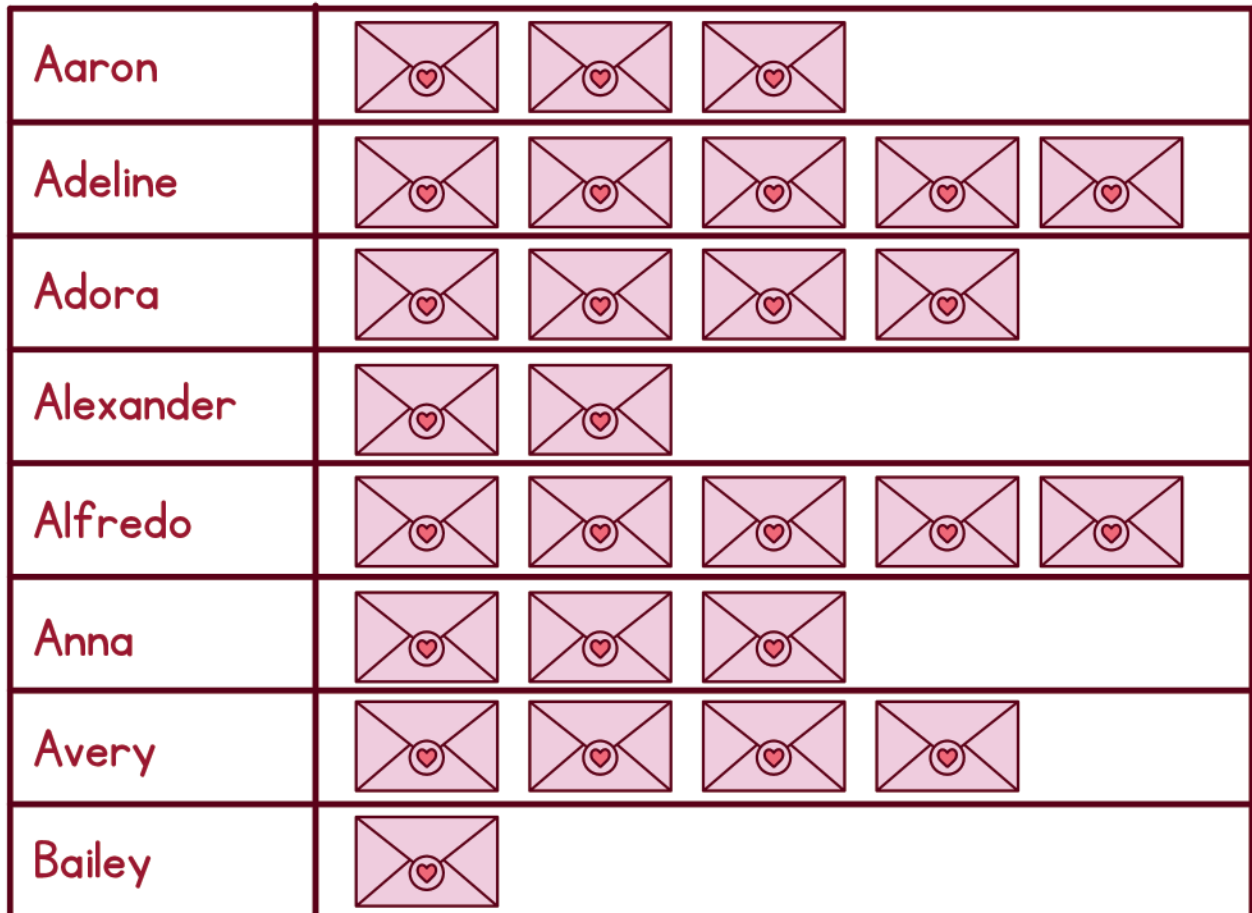


# VALENTINE'S DAY CARD EXCHANGE

The pictograph below shows how many cards each child sent. Use the pictograph to answer the questions.



key:  equals 2 people

1. How many cards did Anna send? \_\_\_\_\_
2. How many cards did Alfredo send? \_\_\_\_\_
3. How many more cards did Avery send than Alexander? \_\_\_\_\_
4. How many cards did Aaron send? \_\_\_\_\_
5. Name two people who sent the same number of cards. \_\_\_\_\_
6. How many more cards did Alfredo send than Bailey? \_\_\_\_\_
7. How many cards did Adora send? \_\_\_\_\_

# Valentine Candy Probability

Answer the questions about the candy below.

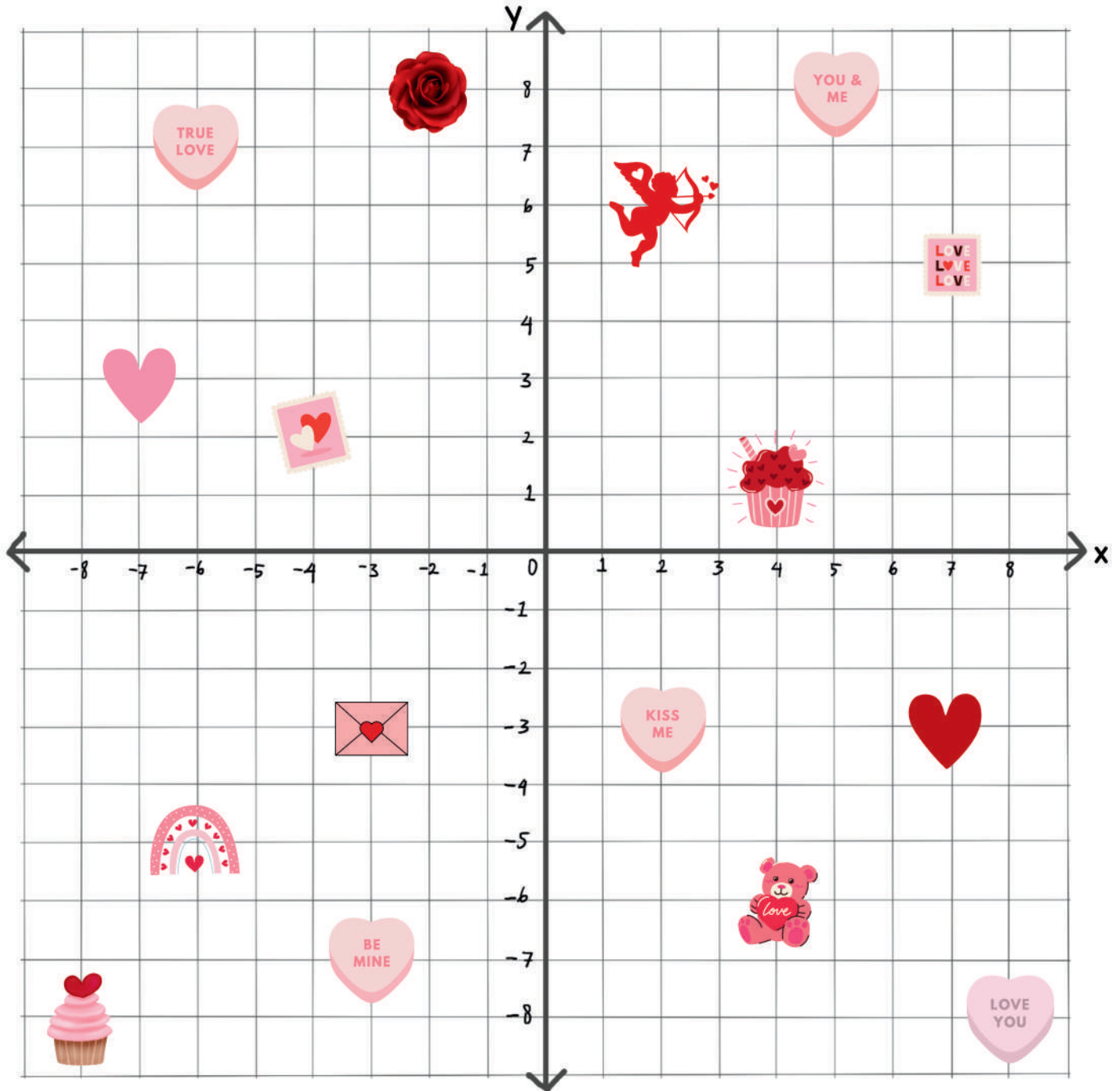










The candies above are placed in a bag. They have hearts with each of the letters of the word Valentine in a bag. One student reaches in and pulls out a letter. Each time, the candy is placed back in the bag for the next student.

1. What is the probability the candy will be purple?  $\frac{2}{9}$  \_\_\_\_\_
2. What is the probability the candy will be pink? \_\_\_\_\_
3. What is the probability the candy will have a V? \_\_\_\_\_
4. What is the probability the candy will have an E? \_\_\_\_\_
5. What is the probability the candy will have a vowel? \_\_\_\_\_
6. What is the probability the candy will have an E or an N? \_\_\_\_\_
7. What is the probability the candy will not be a T? \_\_\_\_\_
8. What is the probability the candy will be a consonant? \_\_\_\_\_

# Valentine's Coordinate Grid

Locate each object and write the coordinates of its location. (x, y)



 ( , )
  ( , )
  ( , )
  ( , )
  ( , )
  ( , )
  ( , )
  ( , )




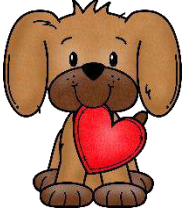
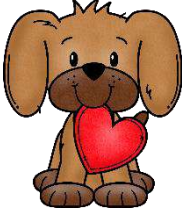
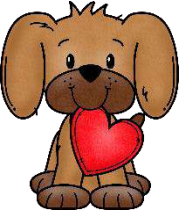
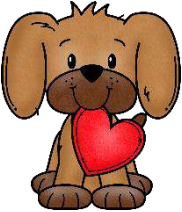
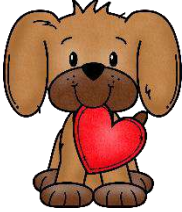



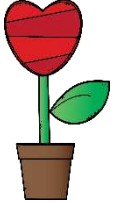

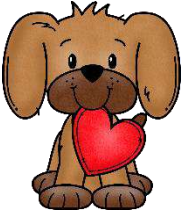

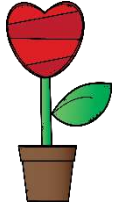
 (-8, -8)
  ( , )
  ( , )
  ( , )
  ( , )
  ( , )
  ( , )
  ( , )

## Worksheet 1





Find the number that each picture represents.

Each row adds up to the total at the end of the row.

Each column adds up to the total at the top of the column.

26	32	17	26	
				20
				20
				29
				32

Write your answers under each picture.


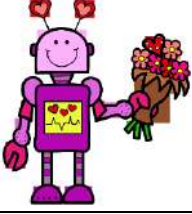











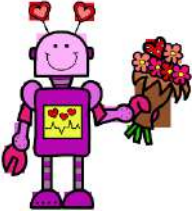


			

## Worksheet 2


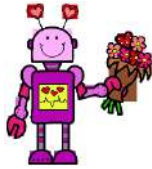



Find the number that each picture represents.

Each row adds up to the total at the end of the row.

Each column adds up to the total at the top of the column.

56	56	136	98	
				106
				55
				94
				91

Write your answers under each picture.



## Worksheet 3 – Match the Hearts

Use the key to substitute values into the algebraic expressions and calculate the value of each heart. Match the hearts to make 14 pairs with the same solutions.

l	o	v	e	a	n	d	h	u	g	s
3	-10	7	4	-4	2	18	6	-9	5	0.5

$$l + o + v + e =$$

$$l^4 =$$

$$2d + 1 =$$

$$d^2 =$$

$$h^2g =$$

$$ev =$$

$$n(v + l + e) =$$

$$o^2 - g^2 =$$

$$g - 2h =$$

$$-2gov =$$

$$n^2d =$$

$$7g + n =$$

$$dg + u =$$

$$2(u^2 - u) =$$

$$2a + 3v =$$

$$2s - 2v =$$

$$o^2v =$$

$$d - h =$$

$$l + o =$$

$$3g^2 =$$

$$4hl =$$

$$eu^2 =$$

$$e^2s^2 =$$

$$e^3 - 2 =$$

$$oa + 11n =$$

$$4l =$$

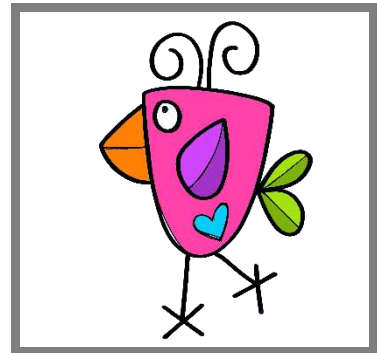
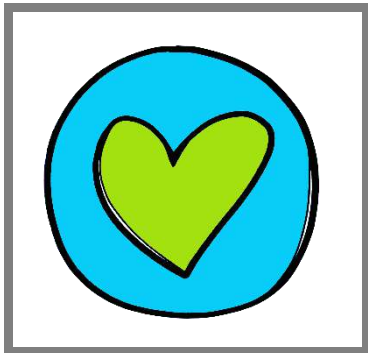
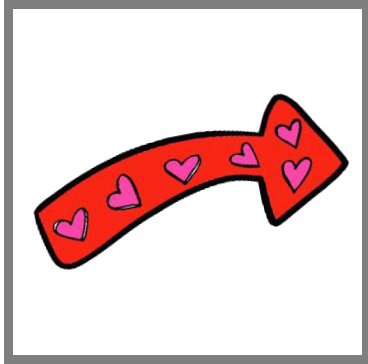
$$an - g =$$

$$6s + 2g =$$

Worksheet 4

These six cards each have a number on the other side.

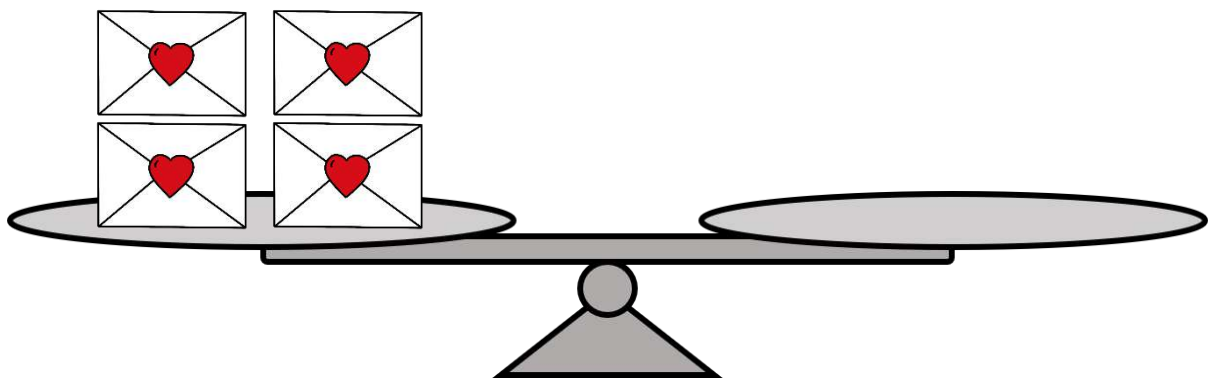
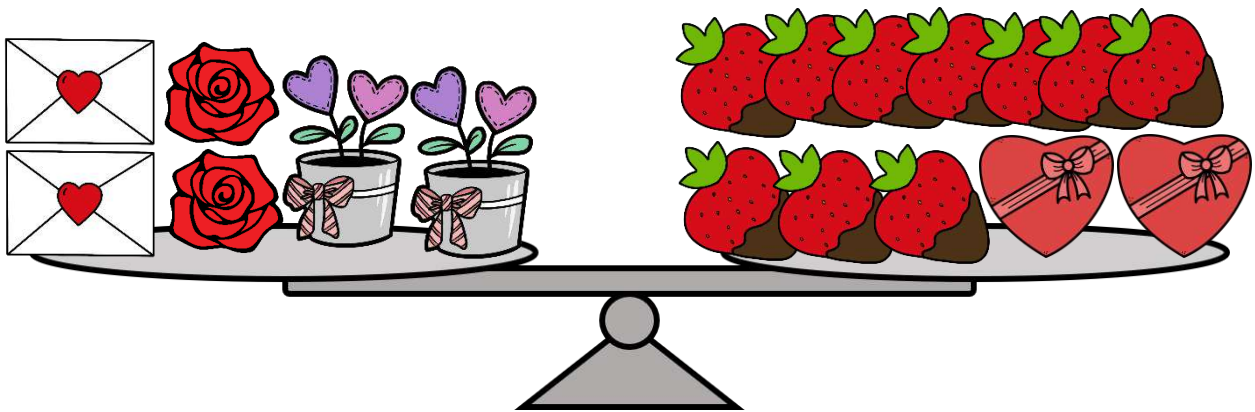
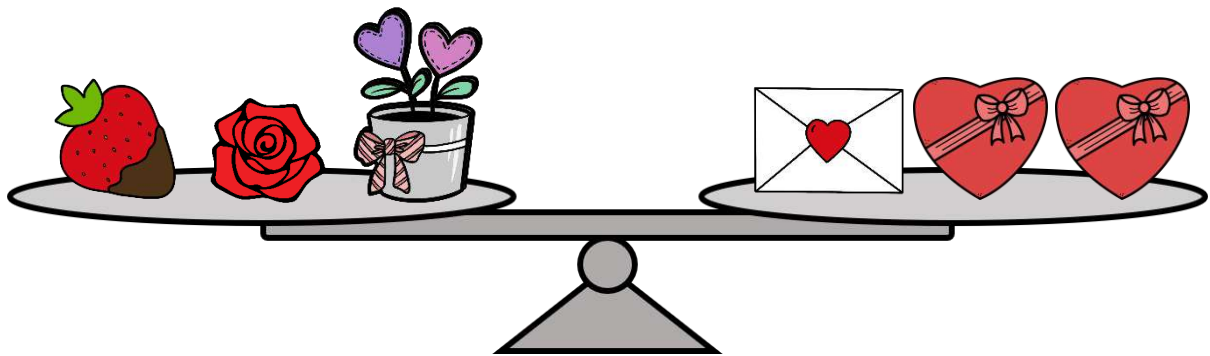
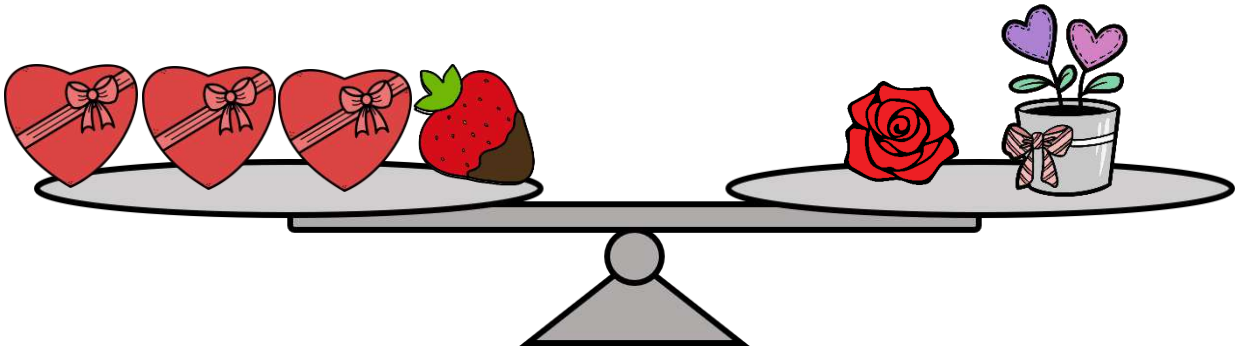
Use the clues to find out which number is on which card.

The Clues

- The six numbers are: 20, 21, 25, 30, 500 and 525.
- The number on the Love card multiplied by the number on the Heart card is equal to the number on the Arrow card.
- The number on the Heart card added to the number on the Arrow card is equal to the number on the Cupcake card.
- The number on the Cupcake card divided by the number on the Heart card is equal to the number on the Bird card.

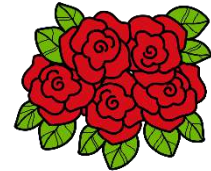
### Worksheet 5

Draw the correct number of heart chocolate boxes to balance the last scale.





## Worksheet 6



Five girls received five different Valentines cards and 5 different Valentines presents, but they have got them all mixed up.

Use the clues to find out which girl received which present and card.



### The Clues

1. Eleanor did not receive the roses.
2. Naomi got a blue card.
3. The person who received the ring got a red card.
4. Zoe did not get a purple card.
5. Amy received a box of chocolates.
6. Elspeth did not get the cup of candy or the purple card.
7. The cupcake came with a purple card.
8. The box of chocolates did not come with a white card.
9. Eleanor did not get a pink or a white card.
10. Naomi received the roses.



### Answers


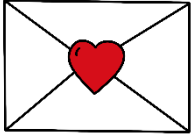







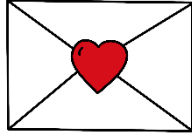



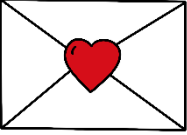
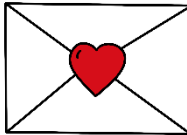


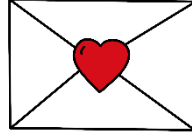
<b>Name</b>					
<b>Present</b>					
<b>Card</b>					

## Worksheet 7

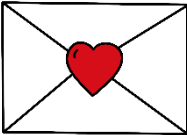



Find the number that each picture represents.

Each row adds up to the total at the end of the row.

Each column adds up to the total at the top of the column.

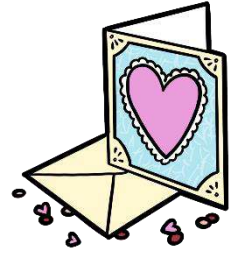
108	99	113	106	97	
					114
	<i>love</i>			<i>love</i>	118
					93
	<i>love</i>				105
<i>love</i>		<i>love</i>	<i>love</i>	<i>love</i>	93

Write your answers under each picture.

	<i>love</i>			

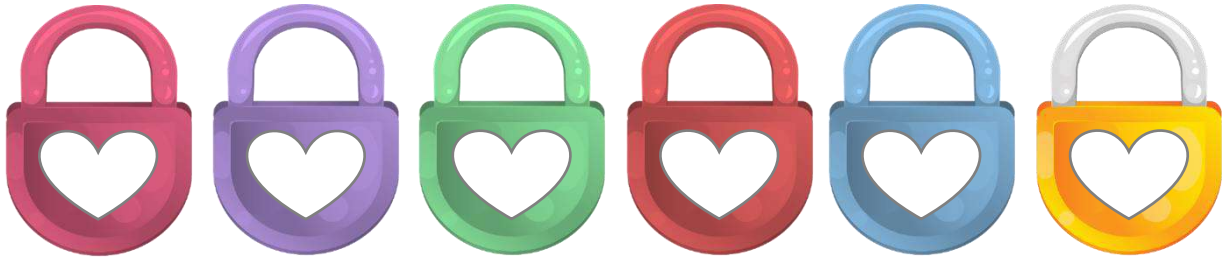
Worksheet 8

Unlock My Heart



It is Valentine's Day and all the Valentine's cards are stuck in the mailbox.

Help crack the code to unlock them.



M

Y

L

O

V

E

Using the clues below, find the correct number for each lock and write your answers in each lock heart.


Lock M 

Three boxes of chocolates and four cards cost forty-three dollars.

Five boxes of chocolates and three cards cost fifty-seven dollars.

Find the cost of one box of chocolates to solve Lock M.

$M = \square$

Lock Y 

There are some love birds and some kittens in the pet store.

Altogether there are twenty-six heads and sixty-six legs.

Find the number of kittens to solve Lock Y.

$y = \square$



Worksheet 9Unlock My HeartLock L

Four gold hearts of different sizes weigh a total of thirty-two ounces.

The second gold heart is three ounces heavier than the first gold heart.

The third gold heart is twice the weight of the second gold heart.

The fourth gold heart is five ounces more than the third gold heart.

Find the weight of the first gold heart to solve Lock L.

$L = \boxed{\phantom{000}}$

Lock O

Fourteen flower stalls sell a total of 1176 bouquets of roses each year between them.

Find the average number of bouquets that one stall sells in a month to solve Lock O.

Lock V

$O = \boxed{\phantom{000}}$

Nine florists can make five hundred and four bouquets of roses in seven hours.

Find how many bouquets one florist can make in half an hour to solve Lock V.

$V = \boxed{\phantom{000}}$

Lock E

There are two hundred and ninety-one Valentine's cards waiting to be delivered around a school.

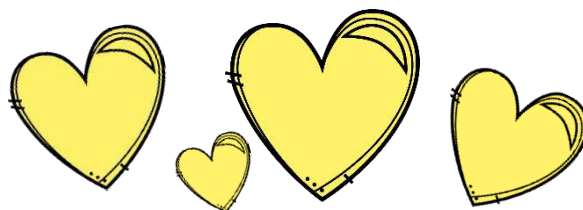
Seventeen cards are delivered to each of seven classes.

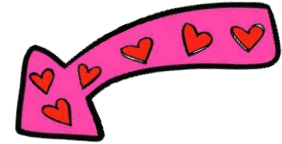
Eight more classes get sixteen cards each.

Four classes get nine cards each.

Find the number of cards left to deliver to solve Lock E.

$E = \boxed{\phantom{000}}$



Worksheet 10

Use the clues to find four numbers.

The number of the letter v in the alphabet if a=1, b=2 etc.	The date in February of Valentine's Day.	The number of people in a couple.	The number of letters in the second month of the year.

Use each of the four numbers above exactly once to make as many of the numbers 1-100 as you can. For example, add all four numbers.

You can add, subtract, multiply and divide and use order of operations. There are at least 50 different numbers you can make!

Color all the numbers you can make in pink.







<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>
<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>
<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>
<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>
<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>
<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>77</b>	<b>78</b>	<b>79</b>	<b>80</b>
<b>81</b>	<b>82</b>	<b>83</b>	<b>84</b>	<b>85</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>
<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>100</b>


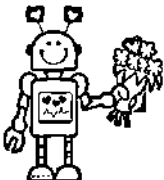





## ANSWERS

### Worksheet 1 - ANSWER KEY:

			
5	8	2	11

### Worksheet 2 - ANSWER KEY:

				
23	15	19	34	7

## ANSWERS

### Worksheet 3 – QUICK ANSWER KEY

$$l + o + v + e = 4 = e^2s^2$$

$$l^4 = 81 = dg + u$$

$$2d + 1 = 37 = 7g + n$$

$$d^2 = 324 = eu^2$$

$$h^2g = 180 = 2(u^2 - u)$$

$$ev = 28 = n(v + l + e)$$

$$-2gov = 700 = o^2v$$

$$o^2 - g^2 = 75 = 3g^2$$

$$g - 2h = -7 = l + o$$

$$n^2d = 72 = 4hl$$

$$2s - 2v = -13 = an - g$$

$$d - h = 12 = 4l$$

$$2a + 3v = 13 = 6s + 2g$$

$$oa + 11n = 62 = e^3 - 2$$

## ANSWERS

### Worksheet 3 – FULL ANSWERS

There are 14 matching pairs of hearts with the following answers:

l	o	v	e	a	n	d	h	u	g	s
3	-10	7	4	-4	2	18	6	-9	5	0.5

The hearts contain the following equations and answers:

- $l + o + v + e = 4$
- $l^4 = 81$
- $2d + 1 = 37$
- $d^2 = 324$
- $h^2g = 180$
- $ev = 28$
- $n(v + l + e) = 28$
- $-2gov = 700$
- $o^2 - g^2 = 75$
- $g - 2h = -7$
- $n^2d = 72$
- $7g + n = 37$
- $dg + u = 81$
- $2(u^2 - u) = 180$
- $2a + 3v = 13$
- $2s - 2v = -13$
- $o^2v = 700$
- $d - h = 12$
- $l + o = -7$
- $3g^2 = 75$
- $4hl = 72$
- $eu^2 = 324$
- $e^2s^2 = 4$
- $e^3 - 2 = 62$
- $oa + 11n = 62$
- $4l = 12$
- $an - g = -13$
- $6s + 2g = 13$

## ANSWERS

### Worksheet 4 - ANSWER KEY:

Arrow card = 500

Cupcake card = 525

Flower card = 30

Heart card = 25

Love card = 20

Bird card = 21

### Worksheet 5 - ANSWER KEY:

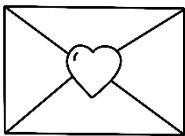



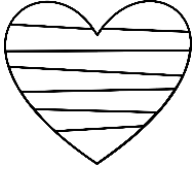
16 Heart Chocolate Boxes

### Worksheet 6 - ANSWER KEY:

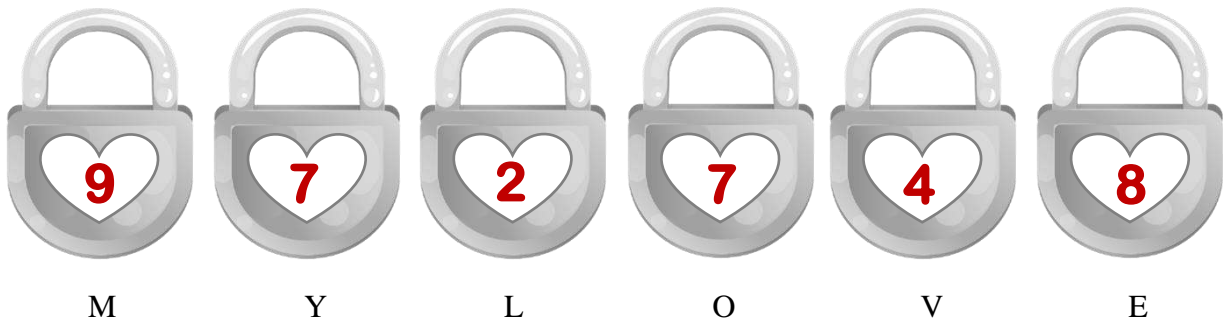
<b>Name</b>	Eleanor	Amy	Zoe	Elsbeth	Naomi
<b>Present</b>	Cupcake	Box of Chocolates	Cup of Candy	Ring	Roses
<b>Card</b>	Purple	Pink	White	Red	Blue

## ANSWERS

### Worksheet 7 - ANSWER KEY:

				
21	18	16	24	29

### Worksheets 8 & 9 - ANSWER KEY:





## ANSWERS

### Worksheet 10 - ANSWER KEY:

The number of the letter v in the alphabet if a=1, b=2 etc.	The date in February of Valentine's Day.	The number of people in a couple.	The number of letters in the second month of the year.
22	14	2	8

There are at least 50 different numbers you can make! There may be more.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

**ANSWERS****Worksheet 10 - ANSWER KEY:**

These are some of the answers. There may be more!

$$2 - ((22 - 14) \div 8) = 1$$

$$22 - 14 + 2 - 8 = 2$$

$$(22 \div 2) \div (14 - 8) = 4$$

$$8 + (22 \div 2) - 14 = 5$$

$$(22 + 14) \div (8 - 2) = 6$$

$$((22 + 14) \times 2) \div 8 = 9$$

$$((22 + 14) \div 2) - 8 = 10$$

$$(22 \times 8) \div (14 + 2) = 11$$

$$22 - 14 - 2 + 8 = 14$$

$$22 - 14 + 2 + 8 = 18$$

$$(22 + 14 + 8) \div 2 = 22$$

$$(22 - 14) + (8 \times 2) = 24$$

$$22 + 14 - 2 - 8 = 26$$

$$22 + 14 + 2 - 8 = 30$$

$$(22 - 14) \times (8 \div 2) = 32$$

$$(22 \times (14 - 2)) \div 8 = 33$$

$$((14 \div 2) + 8) + 22 = 37$$

$$((22 \times 2) + 8) - 14 = 38$$

$$22 + 14 - 2 + 8 = 42$$

$$22 + 14 + 2 + 8 = 46$$

$$(22 - 14) \times (8 - 2) = 48$$

$$((22 \times 2) + 14) - 8 = 50$$

$$(22 + 14) + (8 \times 2) = 52$$

$$(22 + 8) + (14 \times 2) = 58$$

$$((22 - 14) \times 8) - 2 = 62$$

$$((22 + 14) \times 2) - 8 = 64$$

$$22 \times (14 - 8) \div 2 = 66$$

$$((14 \times 8) + 22) \div 2 = 67$$

$$((22 \div 2) \times 8) - 14 = 74$$

$$(22 \times 14) \div (8 \div 2) = 77$$

$$((14 \div 2) \times 8) + 22 = 78$$

$$(22 - 14) \times (2 + 8) = 80$$

$$((22 \times 8) - 14) \div 2 = 81$$

$$(22 - (2 \times 8)) \times 14 = 84$$

$$(22 + 14 + 8) \times 2 = 88$$

$$(14 \times 8) - (22 - 2) = 92$$

$$((22 \times 8) + 14) \div 2 = 95$$

















$$((22 - 8) \times 14) \div 2 = 98$$

# VALENTINE'S DAY CARD EXCHANGE

1. How many cards did Anna send? 6
2. How many cards did Alfredo send? 10
3. How many more cards did Avery send than Alexander? 4
4. How many cards did Aaron send? 6
5. Name two people who sent the same number of cards. Adeline and Alfredo
6. How many more cards did Alfredo send than Bailey? 8
7. How many cards did Adora send? 8

## Valentine Candy Probability

1.  $\frac{2}{9}$
2.  $\frac{1}{9}$
3.  $\frac{1}{9}$
4.  $\frac{2}{9}$
5.  $\frac{4}{9}$
6.  $\frac{4}{9}$
7.  $\frac{8}{9}$
8.  $\frac{5}{9}$

 (8, -8)	 (4, 1)	 (7, 5)	 (-3, -3)	 (2, 6)	 (-6, -5)	 (-4, 2)	 (4, -6)
 (-8, -8)	 (7, -3)	 (-3, -7)	 (5, 8)	 (-7, 3)	 (-2, 8)	 (2, -3)	 (-6, 7)