Name: _____ Date: _____

CHAPTER 5

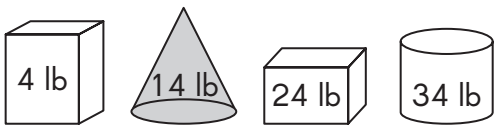
Data and Probability

Worksheet 1 Average

Find the mean or average of each set of data.

Example

The weights of four objects are shown below.



$$\text{Mean or average} = \frac{\text{Total number or amount}}{\text{Number of items}}$$

Step 1 Find the total weight of all the objects.

4 + 14 + 24 + 34 = 76 lb

Step 2 Divide the total weight by the number of objects.

76 ÷ 4 = 19 lb

The average weight of the four objects is 19 pounds.

1. The volumes of five containers are listed below.

48 mL, 26 mL, 32 mL, 57 mL, 97 mL

Step 1 Find the total volume of all the containers.

_____ + _____ + _____ + _____ + _____ = _____ mL

Step 2 Divide the total volume by the number of containers.

_____ ÷ 5 = _____ mL

The average volume of the containers is _____ milliliters.

Name: _____ **Date:** _____

2. The distances traveled by some trucks are listed below.

536 km, 450 km, 152 km, 824 km, 375 km, 459 km

Total distance = _____ + _____ + _____ + _____ +

_____ + _____

= _____ km

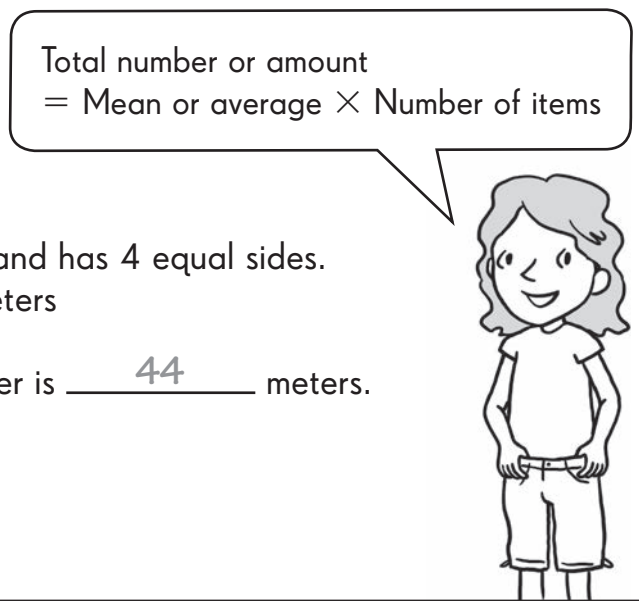
Average distance = _____ ÷ 6 = _____ km

The average distance traveled is _____ kilometers.

Find the total from the mean or average.

Example

The mean length of a side of a square plot of land is 11 meters. What is the plot's perimeter?



A square plot of land has 4 equal sides.
11 × 4 = 44 meters

The plot's perimeter is 44 meters.

Name: _____ **Date:** _____

3. A bottle of milk is poured into 8 smaller cartons. The mean volume of milk in each carton is 375 milliliters. What is the total volume of milk in the cartons?

4. Mrs. Ellis spent an average of $28 on a book. She bought 185 books for the school library. What is the total amount of money Mrs. Ellis spent?

5. Mary walks to school every day. She walks an average distance of 750 meters each day. What is the total distance Mary walked in 5 days?

Total distance Mary walked in 5 days

= _____ × _____ = _____ m

She walked _____ meters in 5 days.

Name: _____ **Date:** _____

6. The arm lengths of 7 students are measured during a math class. The average length of their arms is 68 centimeters. Find the total length of their arms.

7. The table shows the scores Joe received for four tests.

Test	First	Second	Third	Fourth
Score	67	74	?	92

Joe's mean score for the four tests is 79.

a. Find the total score for the four tests.

b. What is Joe's score for the third test?

Name: _____ Date: _____

Complete. Use the data in the table.

The table shows the number of basketball games that Rudd played in during two years.

Opponent	Number of Games
Dallas	10
Lancaster	9
Chicago	13
Seattle	11
Washington	15

Example

Rudd played 11 games against Seattle.

8. Rudd played the most games against _____.

9. Rudd played a total of _____ games in two years.

10. The average number of games Rudd played a year is _____.

Name: _____ **Date:** _____

Solve.

Calvin bought 1 kilogram of each type of nut.

Example

How many kilograms of nuts did Calvin buy altogether?

Calvin bought 3 kilograms of nuts altogether.

11. How much did he pay altogether?

12. Find the average price of a kilogram of nuts.

Name: _____ Date: _____

Worksheet 2 Median, Mode, and Range

Find the median of each set of data.

Example

4, 7, 9, 12, 16, 25, 33

The median is 12.

When a set of data arranged from least to greatest has one middle number, the middle number is the **median**.

1. 199 400 601 802 1,003 1,204 1,405

a. What is the middle number? _____

b. What is the median? _____

2.

The median mass is _____ kilograms.

3.

Game	A	B	C	D	E
Score	34	46	60	74	88

The median score for the games is _____.

Name: _____ **Date:** _____

Find the median of each set of data.

Example

15 25 35 65 85 105

The two middle numbers are 35 and 65.

Mean $= \frac{35 + 65}{2} = 50$

The median is 50.

4.

107 m 109 m 111 m 113 m 115 m 117 m

a. What are the middle numbers?

The middle numbers are _____ and _____.

b. What is the median?

Mean $= \frac{\square + \square}{2}$

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

$= \square$ m

The median is _____ meters.

Name: _____ **Date:** _____

Order each set of data from least to greatest. Then find the median.

Example

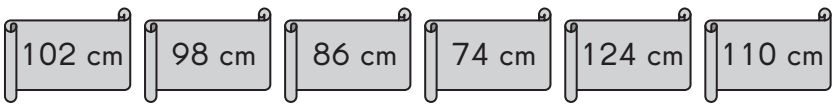
These are the sales prices of some electrical appliances in a store.

Ordered from least to greatest:

least greatest

The median price is $23.

5. These are the heights that six students jumped during a high jump event.



Ordered from least to greatest:

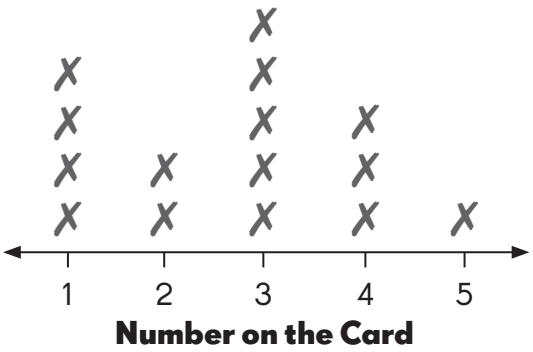
least greatest

The median height is _____ centimeters.

Name: _____ **Date:** _____

Find the mode. Use the data in the line plot.

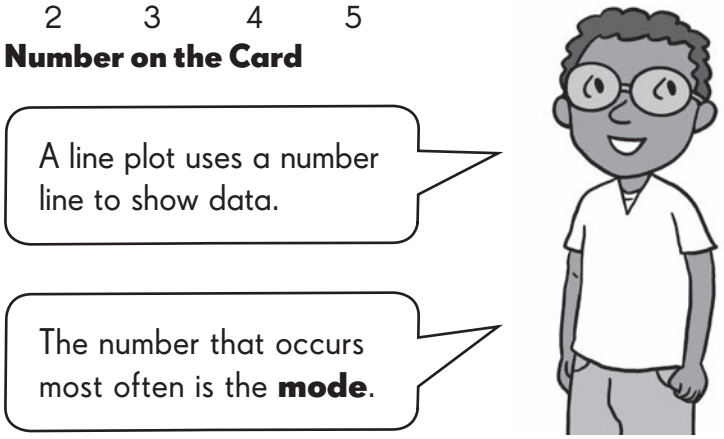
Harry picks some number cards from a bag. He records the numbers on the line plot. Each ✗ represents 1 card.



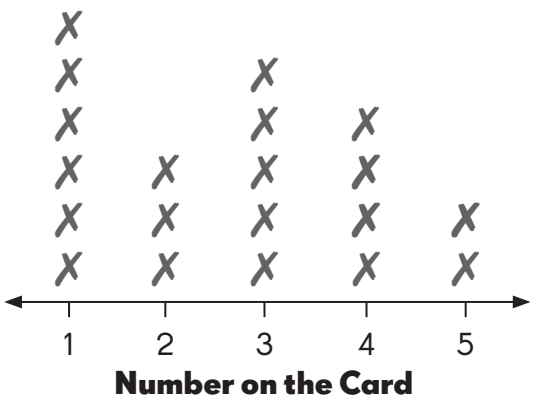
Example

There are 5 ✗s for the number 3.
The number 3 occurs most often.

So, the mode is 3.



6. Harry picks out 5 more number cards from the bag. He includes these numbers on the line plot.



a. The card with the greatest number of ✗s is _____.

b. The mode of this data set is _____.

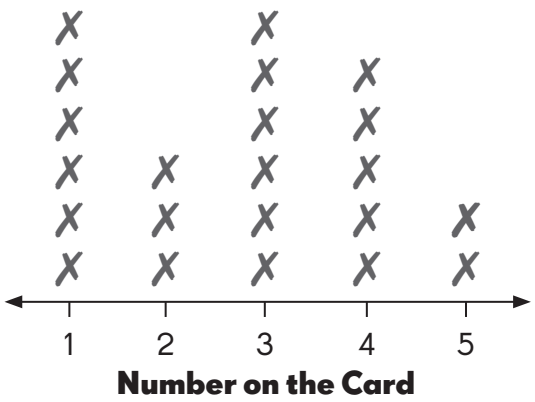
c. Harry picked a total of _____ cards from the bag.

Name: _____ **Date:** _____

Find the modes. Use the data in the line plot.

Example

Tashi picks 22 number cards from a bag.
She records the numbers on the line plot.



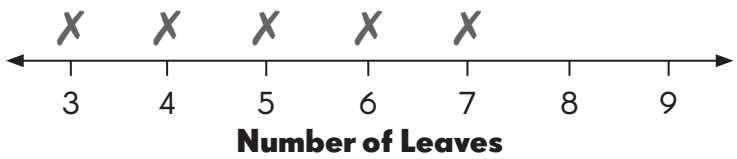
There are 6 ✗s each for card number 1 and card number 3.

So, the modes of this data set are 1 and 3.

A set of data can have more than 1 mode.

7. The set of data shows the number of leaves on different branches of a tree.

3, 3, 3, 4, 4, 5, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 7, 7, 7, 7, 8, 8, 8, 9, 9



a. Complete the line plot. Each ✗ represents 1 branch.

b. _____ branches have 7 leaves each.

c. The modes of this data set are _____ and _____.

Name: _____ **Date:** _____

Find the range of each set of data.

Example

Here are the distances traveled by Mr. Tyler over a two-week period.

87 miles, 129 miles, 56 miles, 423 miles, 298 miles

Range = Greatest number − Least number

423 − 56 = 367 miles

So, the range of this set of numbers is 367 miles.

8. These are the masses a weightlifter lifted during training.

a. The smallest mass is _____.

b. The largest mass is _____.

c. The range of the mass lifted

= largest mass − smallest mass

= _____ − _____

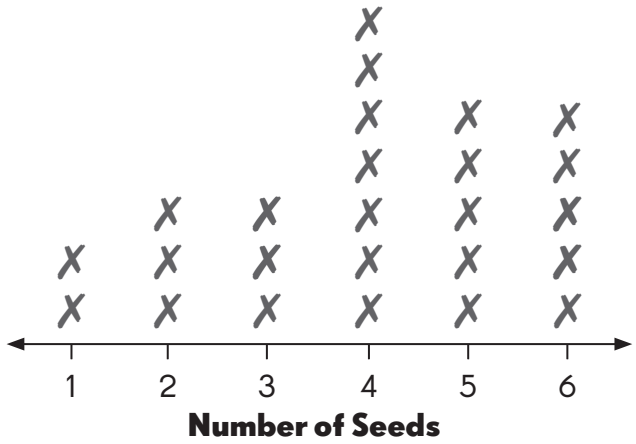
= _____

Name: _____ **Date:** _____

Find the mean of each set of data using a line plot.

Example

Uncle Joe cuts some fruits and counts the number of seeds in each fruit.
The line plot shows the number of seeds in each fruit.
Each ✗ represents 1 fruit.



2 fruits have 1 seed → $2 \times 1 = 2$
3 fruits have 2 seeds → $3 \times 2 = 6$
3 fruits have 3 seeds → $3 \times 3 = 9$
7 fruits have 4 seeds → $7 \times 4 = 28$
5 fruits have 5 seeds → $5 \times 5 = 25$
5 fruits have 6 seeds → $5 \times 6 = 30$

$$\text{Mean} = \frac{\text{Total number of seeds}}{\text{Total number of fruits}}$$

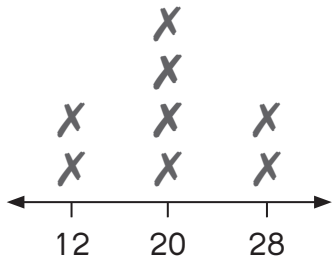
$$= \frac{2 + 6 + 9 + 28 + 25 + 30}{2 + 3 + 3 + 7 + 5 + 5}$$

$$= \frac{100}{25} = 4$$

The mean number of seeds is 4.

Name: _____ **Date:** _____

9. The line plot shows the lengths of ribbon Mrs. Kent cut.



2 ribbons have a length of 12 centimeters → $2 \times 12 =$ ☐ cm

4 ribbons have a length of 20 centimeters → $4 \times 20 =$ ☐ cm

2 ribbons have a length of 28 centimeters → $2 \times 28 =$ ☐ cm

Total length of all the ribbons $=$ ☐ $+$ ☐ $+$ ☐

$=$ ☐ cm

$$\text{Mean} = \frac{\text{Total length of ribbons}}{\text{Total number of ribbons}} = \frac{\square}{\square}$$

$=$ ☐ cm

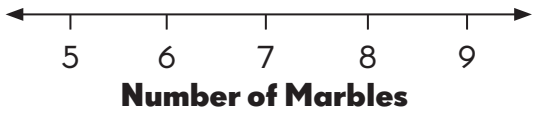
The mean length of the ribbons is _____ centimeters.

Name: _____ **Date:** _____

10. Students were asked to count the number of marbles in their marble bags. The table shows the data collected.

Number of Bags	6	10	4	8	7
Number of Marbles in Each Bag	5	6	7	8	9

Make a line plot to show the data. Each ✗ represents 1 bag.



☐ bags have 5 marbles each → ☐ × ☐ = ☐

☐ bags have 6 marbles each → ☐ × ☐ = ☐

☐ bags have 7 marbles each → ☐ × ☐ = ☐

Name: _____ **Date:** _____

☐ bags have 8 marbles each → ☐ × ☐

= ☐

☐ bags have 9 marbles each → ☐ × ☐

= ☐

Total number of marbles = ☐ + ☐ + ☐ + ☐ + ☐

= ☐

$$\text{Mean} = \frac{\text{Total number of marbles}}{\text{Total number of bags}} = \frac{\square}{\square}$$

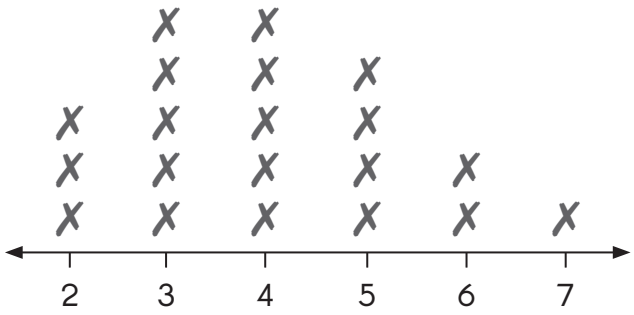
$$= \square$$

The mean number of marbles is _____.

Name: _____ **Date:** _____

Solve. Show your work.

Uncle Sam visits some houses to find out the number of people living in each house. The line plot shows the number of houses and the number of people living in each house. Each ✗ represents 1 house.



Number of People in Each House

11. What is the range of the number of people living in the houses?

12. How many houses in the survey have only 2 people living in them?

Name: _____ **Date:** _____

13. How many houses in the survey have the greatest number of people living in them?

14. Find the mean of the number of people living in each house.

15. Find the modes of this set of data.

Name: _____ Date: _____

Worksheet 3 Stem-and-Leaf Plots

Complete.

These are the scores students received in a math quiz.

67, 42, 73, 75, 88, 94, 69, 97, 81, 98

Example

Make a stem-and-leaf plot with the given set of data.

Step 1 Order the scores from least to greatest.

42, 67, 69, 73, 75, 81, 88, 94, 97, 98

Step 2 Put the tens digits in the stem column.

Step 3 Put the ones digits in the leaves column.

Place the tens digits in the stem column.

outlier

Order the numbers in the ones place from least to greatest.

Math Quiz Scores	
Stem	**Leaves**
4	2
6	7 9
7	3 5
8	1 8
9	4 7 8

6 | 7 stands for 67.

1. The outlier of a data set is the number farthest away from the rest of the data. The outlier of this set of data is _____.

2. The stem 9 has _____ leaves.

Name: _____ **Date:** _____

Complete.

These are the number of rolls that Sally's bakery sold on different days during the month of October.

52 27 48 24 34 41 58 45 47 63

3. Order the number of rolls from least to greatest.

_____

4. Complete the stem-and-leaf plot.

Number of Rolls	
Stem	**Leaves**
2	
3	
4	
5	
6	

5. **a.** The stem 3 has _____ leaves.

b. 2 | 4 stands for _____.

c. The greatest number of rolls sold is _____.

d. Altogether, there are _____ leaves in this set of data.

Name: _____ **Date:** _____

Find the median, mode, and range. Use the stem-and-leaf plot.

The stem-and-leaf plot shows the weight of the apples sold at a market.

Weight of Apples (lb)	
Stem	**Leaves**
3	2 7
4	5 6 6 9
5	3 3 8 8
6	0 2 5 7 9
7	1 2 4 5
9	6

3 | 2 stands for 32.

Example

The median weight is ?.

$\text{Median} = \frac{58 + 60}{2} = \frac{118}{2} = 59$ lb

The median weight is 59 pounds.

Since there are 20 leaves, the set of data has two middle numbers. The two middle numbers are 58 and 60.

6. **a.** The modes are the numbers that occur most often. So, the modes are _____, _____, and _____.

b. Range = Greatest number − Least number

= _____ lb − 32 lb

= _____ lb

c. The outlier in this set of data is _____ pounds.

Name: _____ **Date:** _____

Complete the sentences. Use the data in the stem-and-leaf plot.

The stem-and-leaf plot shows the length of some snakes measured in centimeters.

Length of Snakes (cm)	
Stem	**Leaves**
2	1 6 7
3	4 5 5 8
4	2 2 2 4 6 7 7
5	0 1 4 6
6	1 5

2 | 1 stands for 21.

Example

The length that appears most often is 42 centimeters.

7. **a.** The mode of the set of data is _____ centimeters.

b. 3 | 4 stands for _____ centimeters.

c. The length of the longest snake is _____ centimeters.

d. The length of the shortest snake is _____ centimeters.

e. The range of the lengths is _____ centimeters.

f. The median length of the snakes is _____ centimeters.

Name: _____ Date: _____

Complete. Show your work.

The table shows the amount of money each stall collected during the fair.

Stall	Amount of Money
A	$42
B	$59
C	$46
D	$60
E	$64
F	$75
G	$79
H	$68
I	$65

Example

Which stall collected the most amount of money? Stall G

8. **a.** Make a stem-and-leaf plot to show the set of data.

Amount of Money	
Stem	**Leaves**

4 | 2 stands for 42.

Name: _____ **Date:** _____

b. Is there a mode for this set of data? Explain your answer.

_____

_____

c. What is the range of the amount of money collected?

Range = Greatest amount − Least amount

= _____ − _____

= _____

The range of the amount of money collected is _____.

d. Find the median amount of money collected.

The median amount of money collected is _____.

e. What is the total amount of money collected at the fair?

A total of _____ was collected.

f. Find the average amount of money collected by each stall.

Average amount of money collected

$$= \frac{\text{Total amount of money collected}}{\text{Number of stalls}}$$

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

The average amount of money collected by each stall is _____.

Name: _____ **Date:** _____

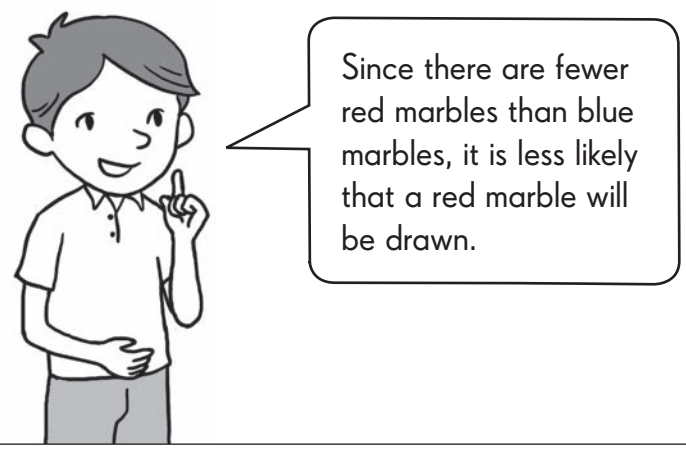
Worksheet 4 Outcomes

Describe the likelihood of each outcome. Write *more likely*, *less likely*, *equally likely*, *certain*, or *impossible*.

There are 2 red marbles and 4 blue marbles in a bag. One marble is drawn from the bag at a time.

Example

A red marble will be drawn from the bag. less likely



1. A blue marble will be drawn. _____

2. After two blue marbles are removed from the bag,

a red marble will be drawn. _____

3. Four yellow marbles are now added to the bag in Exercise 2.

a. A yellow marble will be drawn. _____

b. A blue marble will be drawn. _____

4. All the red and blue marbles are removed from the bag in Exercise 3.

a. A yellow marble will be drawn. _____

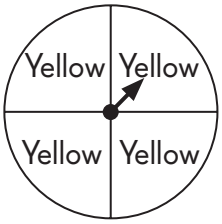
b. A green marble will be drawn. _____

Name: _____ **Date:** _____

Find the possible outcomes. Then describe each likelihood using *more likely*, *less likely*, *equally likely*, *certain*, or *impossible*.

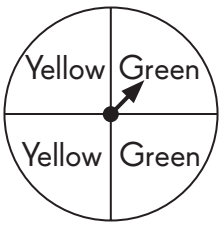
Look at the spinners. Each spinner is spun once.

Example



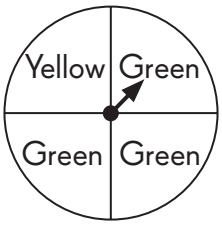
Possible Outcome	Yellow
Likelihood of Landing on Yellow	Certain

5.



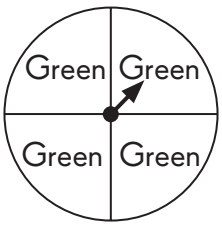
Possible Outcome	
Likelihood of Landing on Yellow	

6.



Possible Outcome	
Likelihood of Landing on Yellow	

7.



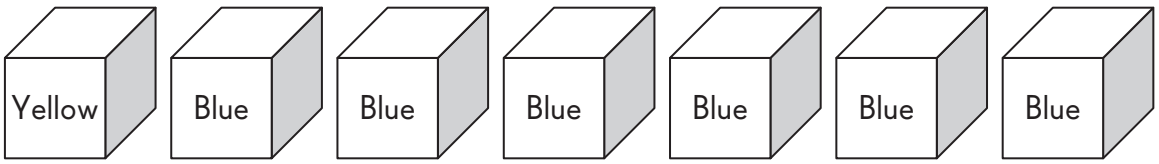
Possible Outcome	
Likelihood of Landing on Yellow	

Name: _____ **Date:** _____

Check (✔) the correct statement that describes each possible outcome.

All the cubes are put into a bag and a cube is drawn from the bag.

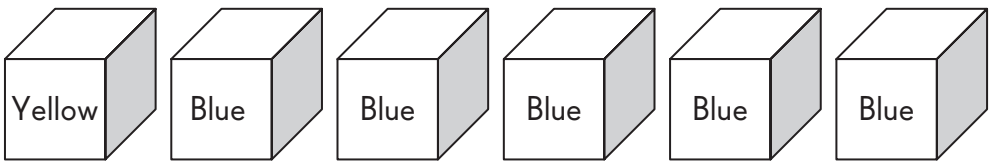
Example



a. You are more likely to draw a yellow cube than a blue cube. ☐

b. You are more likely to draw a blue cube than a yellow cube. ✔

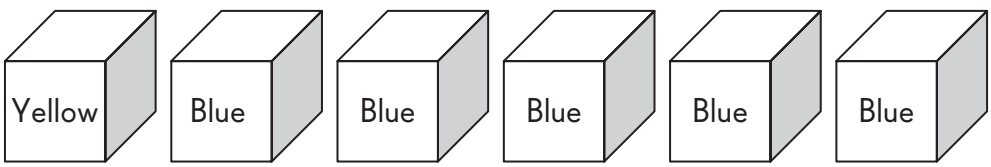
8.



a. You are less likely to draw a yellow cube than a blue cube. ☐

b. You are less likely to draw a blue cube than a yellow cube. ☐

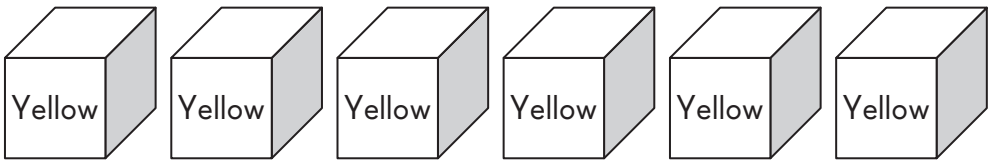
9.



a. It is impossible to draw a yellow cube. ☐

b. It is impossible to draw a green cube. ☐

10.



a. It is certain that you will draw a yellow cube. ☐

b. It is certain that you will draw a blue cube. ☐

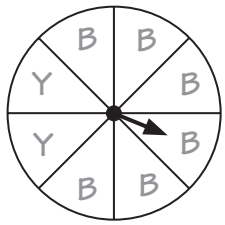
Name: _____ **Date:** _____

Read each description of the outcome. Then label the color of the parts of the spinner.

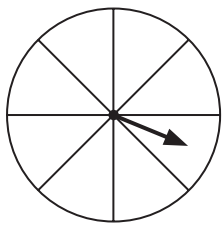
Each spinner is divided into 8 equal parts. Use *B* to represent blue and *Y* to represent yellow.

Example

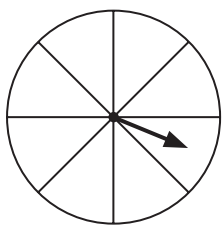
It is more likely that the spinner will land on blue than on yellow.



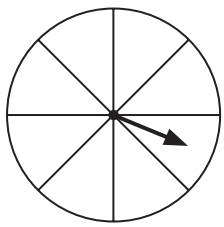
11. It is impossible for the spinner to land on blue.



12. It is as equally likely that the spinner will land on blue as on yellow.



13. It is certain that the spinner will land on blue.

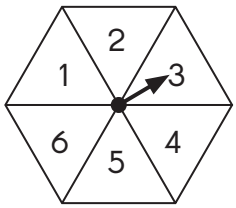


Name: _____ Date: _____

Worksheet 5 Probability as a Fraction

Find the probability as a fraction in simplest form.

Shawn made a spinner with 6 equal parts. He labeled each part with the numbers 1 through 6. Shawn spins the spinner once.



Example

Find the probability of landing on 2 or 3.

Step 1 Find the number of favorable outcomes.

There are only 2 favorable outcomes.

Step 2 Find the total number of possible outcomes.

There are 6 possible outcomes.

Step 3 Find the probability as a fraction.

Probability of a favorable outcome

$$= \frac{\text{Number of favorable outcomes}}{\text{Total number of possible outcomes}} = \frac{2}{6} = \frac{1}{3}$$

The probability of landing on 2 or 3 is $\frac{1}{3}$.

Name: _____ **Date:** _____

1. The probability of landing on an odd number.

The odd numbers are _____, _____, and _____.

Number of favorable outcomes = _____

Number of possible outcomes = 6

Probability of landing on an odd number

$$= \frac{\text{Number of favorable outcomes}}{\text{Total number of possible outcomes}} = \frac{\square}{6} = \frac{\square}{\square}$$

The probability of landing on an odd number is _____.

2. The probability of landing on a number less than 5.

The numbers less than 5 are _____, _____, _____, and _____.

Number of favorable outcomes = _____

Number of possible outcomes = _____

Probability of landing on a number less than 5

$$= \frac{\text{Number of favorable outcomes}}{\text{Total number of possible outcomes}} = \frac{\square}{6} = \frac{\square}{\square}$$

The probability of landing on a number less than 5 is _____.

Name: _____ **Date:** _____

3. The probability of landing on a number greater than 3.

The numbers greater than 3 are _____, _____, and _____.

Number of favorable outcomes = _____

Number of possible outcomes = _____

Probability of landing on a number greater than 3

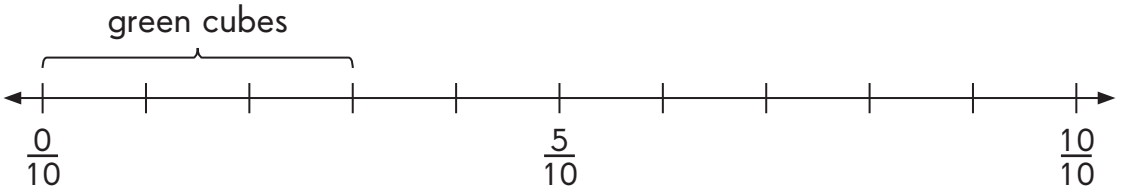
$$= \frac{\text{Number of favorable outcomes}}{\text{Total number of possible outcomes}} = \frac{\square}{\square} = \frac{\square}{\square}$$

The probability of landing on a number greater than 3 is _____.

Name: _____ **Date:** _____

Find each probability on the number line as a fraction in simplest form. Then describe the probability of each outcome as *certain*, *impossible*, *more likely*, *less likely*, or *equally likely*.

There are 5 red cubes, 3 green cubes, and 2 yellow cubes in a bag. One cube is drawn from the bag.

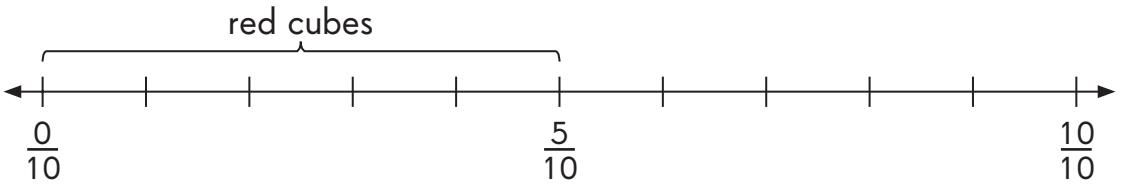


Example

The probability of drawing a green cube is $\frac{3}{10}$.

The number line shows that the likelihood of this outcome is less likely as $\frac{3}{10}$ is nearer to $\frac{0}{10}$ than to $\frac{10}{10}$.

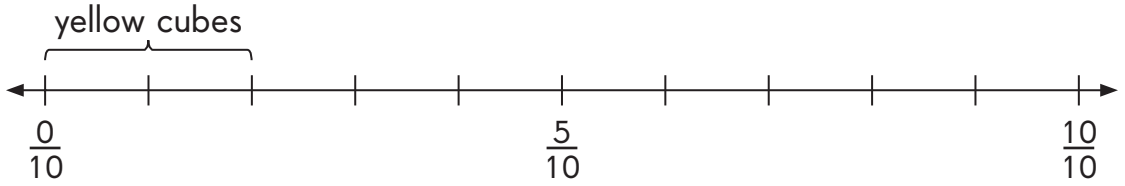
4. The probability of drawing a red cube.



Probability: $\frac{\square}{\square} = \frac{\square}{\square}$ Likelihood of outcome: _____

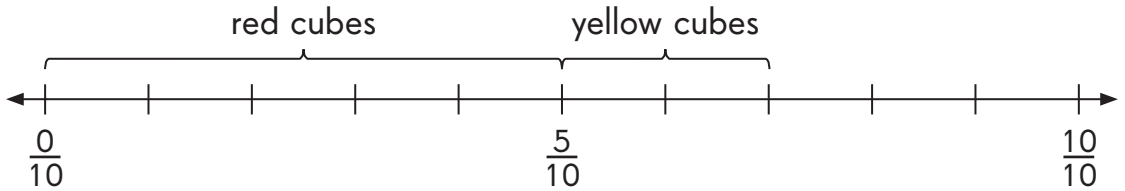
Name: _____ **Date:** _____

5. The probability of drawing a yellow cube.



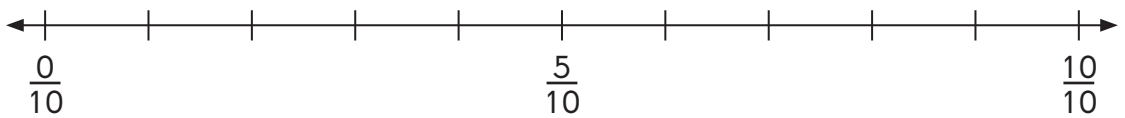
Probability: $\frac{\square}{\square} = \frac{\square}{\square}$ Likelihood of outcome: _____

6. The probability of drawing a red cube or a yellow cube.



Probability: $\frac{\square}{\square}$ Likelihood of outcome: _____

7. The probability of drawing a blue cube.



Probability: $\frac{\square}{\square} = \square$ Likelihood of outcome: _____

Name: _____ **Date:** _____

Find the probability of each outcome. Then describe the outcome as *certain*, *impossible*, *more likely*, *less likely*, or *equally likely*.

Joyce has a set of 10 animal cards. There are 5 dog cards, 2 cat cards, 2 rabbit cards, and 1 bird card in the set. She shuffles the cards, places them face down in a stack, and draws the first card from the top of the stack.

Example

Probability of a dog card $= \frac{5}{10} = \frac{1}{2}$

It is equally likely to draw a dog card.

8. Probability of a rabbit card $= \frac{\square}{\square} = \frac{\square}{\square}$ Likelihood of outcome: _____

9. Probability of a dog or a cat card $= \frac{\square}{\square}$ Likelihood of outcome: _____

10. Probability of a cat, rabbit, or a bird card $= \frac{\square}{\square} = \frac{\square}{\square}$

Likelihood of outcome: _____

11. Probability of a dog, cat, rabbit, or bird card $= \frac{\square}{\square} = \square$

Likelihood of outcome: _____

12. Probability of a mouse card $= \frac{\square}{\square} = \square$ Likelihood of outcome: _____

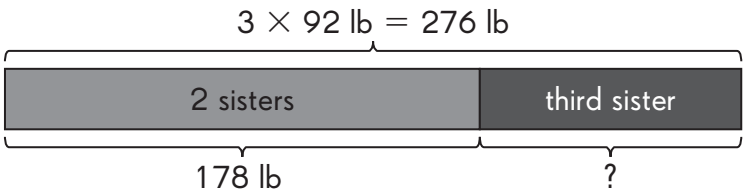
Name: _____ Date: _____

Worksheet 6 Real-World Problems: Data and Probability

Solve each problem using the mean. Show your work.

Example

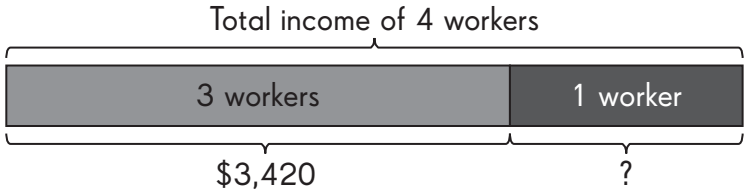
The mean weight of 3 sisters is 92 pounds.
The total weight of 2 of the sisters is 178 pounds.
Find the weight of the third sister.



Total weight = 3 × mean weight = 3 × 92 lb = 276 lb
Weight of the third sister = Total weight − 178 lb
= 276 lb − 178 lb
= 98 lb

The weight of the third sister is 98 pounds.

1. The mean income of 4 workers is $1,250.
The total income of 3 of the workers is $3,420.
Find the income of the fourth worker.



Total income of 4 workers = 4 × mean income

= 4 × _____ = _____

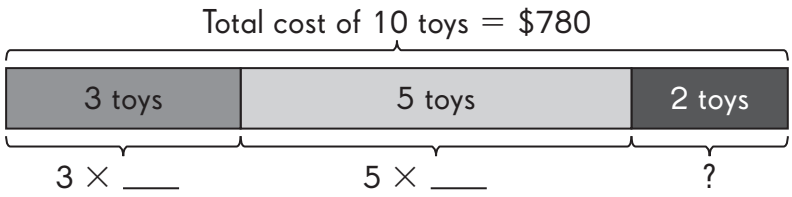
Income of 3 workers = $3,420

Income of the 4th worker = _____ − _____ = _____

The income of the 4th worker is $_____.

Name: _____ **Date:** _____

2. The total cost of 10 toys is $780.
The mean cost of 3 of the toys is $40.
The mean cost of 5 of the other toys is $50.
Find the mean cost of the remaining 2 toys.



Cost of 3 toys = 3 × _____ = _____

Cost of 5 toys = 5 × _____ = _____

Cost of 8 toys = _____ + _____ = _____

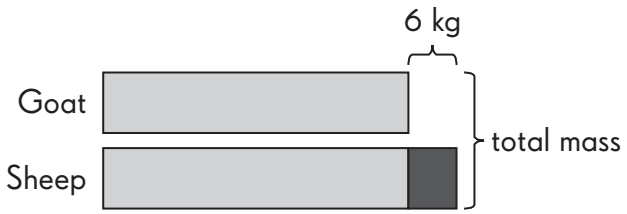
Cost of the remaining 2 toys = _____ − _____ = _____

Mean cost of the 2 toys = $\frac{\square}{2}$ = _____

The mean cost of the remaining 2 toys is $_____.

Name: _____ **Date:** _____

3. The mean mass of a goat and a sheep is 78 kilograms.
The sheep is 6 kilograms heavier than the goat.
Find the mass of each animal.



Total mass of the goat and sheep

$= 2 \times$ _____

$=$ _____

2 units → Total mass $-$ _____

$=$ _____ $-$ _____

$=$ _____

1 unit → $\frac{\square}{2} =$ _____

The mass of the goat is _____ kilograms.

_____ $+ 6$ kg $=$ _____

The mass of the sheep is _____ kilograms.

Name: _____ **Date:** _____

Solve each problem to find the mean, median, mode, and range. Show your work.

4. A gardener delivered roses to 6 florists.
He delivered 684 roses altogether.
He recorded the data in a table, but the last row of data could not be read because the ink was smudged.

Florist	Number of Roses
A	108
B	156
C	96
D	120
E	84
F	?

Example

Find the mean number of roses he delivered.

Mean $= \frac{684}{6} = 114$

The mean number of roses he delivered is 114.

a. How many roses did he deliver to Florist F?

Number of roses delivered to 5 florists

= _____ + _____ + _____ + _____ + _____

= _____

Number of roses delivered to Florist F

= Total number of roses − _____

= _____ − _____

= _____

The number of roses he delivered to Florist F is _____.

Name: _____ **Date:** _____

b. Find the range of the number of roses he delivered.

Range = Greatest number − Least number

= _____ − _____

= _____

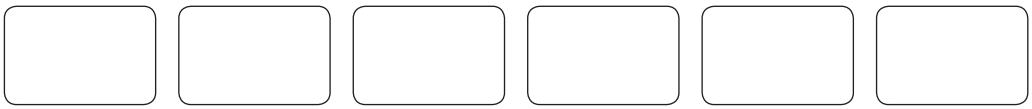
The range of the number of roses delivered is _____.

c. Find the mode of the set of data.

The mode of the set of data is _____.

d. Find the median of the set of data.

Order the numbers from least to greatest.



The middle numbers are _____ and _____.

$$\text{Mean} = \frac{\square + \square}{2} = \square$$

The median of the set of data is _____.

Name: _____ **Date:** _____

5. In a javelin competition, Sam threw the javelin 5 times. The table shows the distance the javelin traveled on each throw. The recorder misplaced 2 of the 5 readings.

Throw	1	2	3	4	5
Distance	68 m	72 m	66 m	?	?

Help the recorder to find the two missing readings using this information.

The range of the data is 8 meters.
The shortest distance thrown is 66 meters.
The mean distance thrown is 70 meters.

a. Find the longest distance the javelin was thrown.

Range = Longest distance − Shortest distance

Longest distance = _____ + _____ = _____

The longest distance the javelin was thrown is _____ meters.

b. Find the missing data.

Use average or mean to find the total.

Total distance
= mean distance × number of throws

= _____ × 5 = _____

The missing data
= total distance − distance of the 4 throws

= _____ − 68 m − 72 m − 66 m − _____

= _____

The missing data is _____ meters.

c. Find the median distance of the 5 throws.

Order the distances from least to greatest.

The median distance is _____ meters.

Name: _____ Date: _____

Solve each problem using a stem-and-leaf plot.

6. Mr. Williams deposits money in his bank account once a month for 12 months.

Amount of Money	
Stem	**Leaves**
6	3 6 8
7	2 ?
8	0 4 4 9
9	1 2 7

6 | 3 stands for 63

Example

The mean amount of money he deposits each month is $80.
Find the total amount of money he deposits in 12 months.

Total amount of money = Mean × Number of months
= $80 × 12
= $960

He deposits $960 in 12 months.

a. Find the missing data in stem 7.

Total amount − Amount of money deposited in 11 months

= ☐ − ☐ − ☐ − ☐ − ☐ − ☐ − ☐ −
☐ − ☐ − ☐ − ☐ − ☐ = ☐

The missing data in stem 7 is $_____.

b. The mode of the set of data is _____.

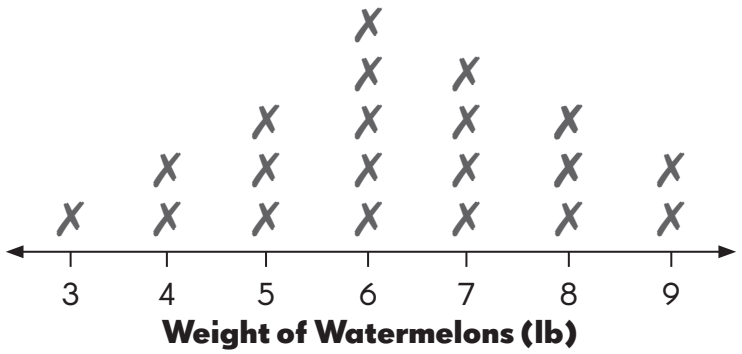
c. The median of the set of data is _____.

d. The range of the set of data is _____.

Name: _____ **Date:** _____

Solve. Show your work.

7. The line plot shows the weight of watermelons (rounded to the nearest pound) sold at a supermarket. Each ✗ represents 1 watermelon.



a. The mode of the set of data is _____ pounds.

b. The median weight of the watermelons is _____ pounds.

c. Each pound of watermelon costs $3. What is the total cost of all the watermelons?

The total cost of all the watermelons is $_____.

Name: _____ **Date:** _____

Solve each problem by finding the probability or by describing the outcome. Show your work.

8. A bag contains 16 marbles.
6 marbles are red, 5 are blue, 3 are green, and 2 are yellow.

Example

Sylvia draws 1 marble from the bag.
What is the probability that the marble is red?

Number of favorable outcomes = 6
Number of possible outcomes = 16

Probability of drawing a red marble = $\frac{6}{16} = \frac{3}{8}$

The probability that the marble is red is $\frac{3}{8}$.

a. Sylvia returns the red marble to the bag. Then she draws 2 marbles from the bag, one at a time. Describe the outcome as *certain*, *impossible*, *more likely*, *less likely*, or *equally likely*.

i. It is _____ that the first marble is yellow.

ii. If the first marble is green, it is _____ that the second marble is yellow or green.

iii. If the first marble is red, it is _____ that the second marble is red, yellow, or green.

iv. If the first marble is blue, it is _____ that the second marble is red, blue, green, or yellow.

Name: _____ **Date:** _____

b. Sylvia returns the 2 marbles to the bag, and Tyron adds 1 blue marble and 3 green marbles to the bag. He then draws 1 marble from the bag. Find the probability as a fraction in simplest form.

i. What is the probability that a red marble is drawn?

Number of favorable outcomes = _____

Number of possible outcomes = 16 + 1 + 3 = _____

Probability of drawing a red marble

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

The probability that a red marble is drawn is _____.

ii. What is the probability that Tyron draws a red, blue, or green marble?

Number of favorable outcomes = _____

Number of possible outcomes = _____

Probability of drawing a red, blue, or green marble

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

The probability that Tyron draws a red, blue, or green marble is _____.