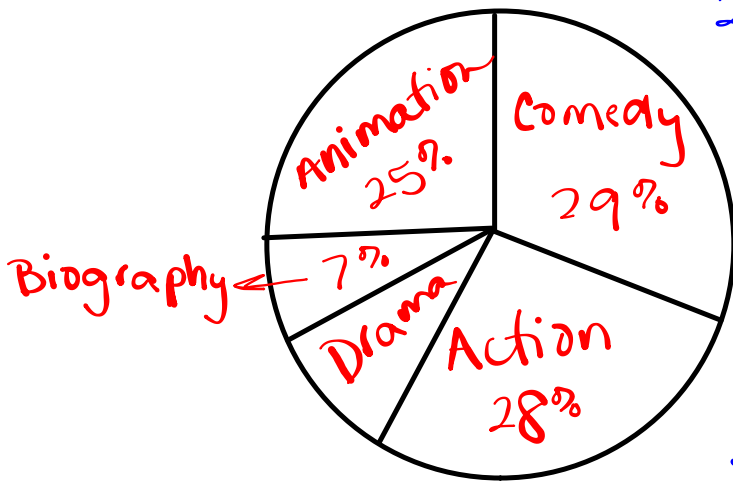


25 people were asked their favorite type of movie and the results are shown below. Warm up back p 37



$25 \times .25$
 (6)

How many students prefer Animation?

How many $.28 \times 25$ students prefer (7) Action?

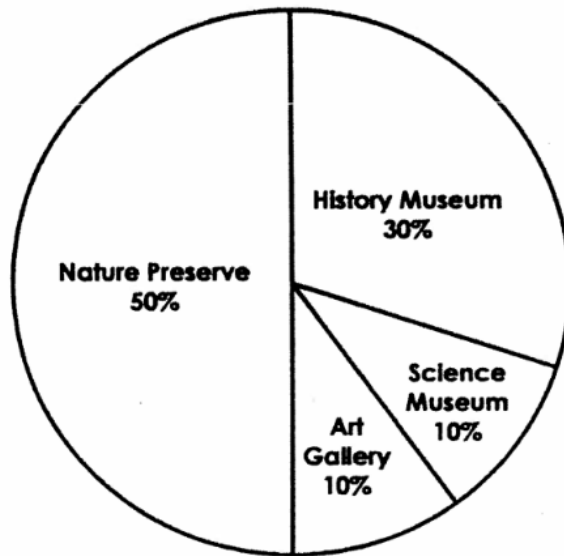
11%
 $.11 \times 25$
 (3)

What percent and how many students prefer Drama?

Round and Round and Round

Mr. Sobieski asked his class to vote on where they would most like to go on a field trip. The choices he gave them were: history museum, science museum, art gallery, and nature preserve.

All 30 students cast one vote each. The pie graph below shows the results.



Complete the table below to show how many votes each choice

to show how many received.

$$30 \times \frac{30}{100}$$

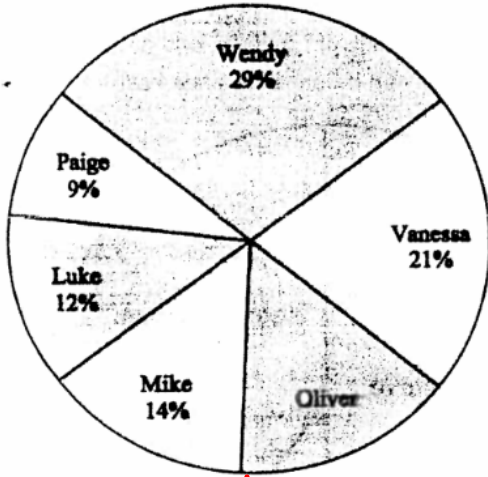
$$30 \times \frac{10}{100}$$

Destination	Number of Votes
History Museum	9
Science Museum	3
Art Gallery	3
Nature Preserve	15

How many more students chose the history museum than the science museum? 6

How many students chose the art gallery or the nature preserve? 18

Class Election Results



Use the graph on the left to answer the following questions.

Who won the election? Wendy

Who had the least number of votes? Paige

What percent of people voted for Oliver?
15%

What percent of people voted for either Luke or Oliver? 27%

Which two candidates had about half the votes? W & V

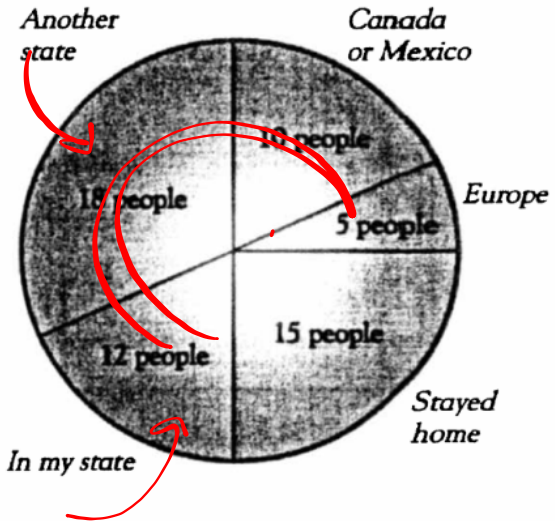
60 people were asked where they went on vacation last year. The circle graph shows the results.

What fraction of people vacationed in Canada or Mexico, or in Europe?
 $\frac{15}{60} = \frac{1}{4}$

What fraction of people vacationed in their state or another state?
 $\frac{30}{60} = \frac{1}{2}$

What fraction of people did not stay at home?
 $\frac{45}{60} = \frac{3}{4}$

What fraction of people vacationed in another state?
 $\frac{18}{60} = \frac{3}{10}$



What Do You Get When You Cross the Atlantic with the Titanic?

Find each answer at the bottom of the page and cross out the letter above it (some are rounded).

- Practice times for five swimmers in the 50-meter freestyle are given in the table. Find the following:
 - The mean of Mike's times.
 - The mean of Jason's times.
 - The mean of the times on Trial 1.
 - The median of Ryan's times.
 - The median of the times on Trial 4.
 - The mode of all 20 times in the table.

Name	Trial 1 (s)	Trial 2 (s)	Trial 3 (s)	Trial 4 (s)
Mike	34.1	33.8	30.5	31.6
Alan	32.5	33.3	34.0	33.8
Jason	41.7	40.0	39.2	38.4
Scott	29.4	29.4	31.0	31.6
Ryan	33.8	32.5	33.8	33.4

- The weekly salary for 10 people is given in the table. Find:
 - The mean salary.
 - The median salary.
 - The mode of the salaries.

Weekly Salary	No. of People
\$2400	1
\$900	1
\$600	3
\$500	5

- The mean weight of 32 math students is 98.3 lb. If the students could all stand on the scale together, what would their total weight be?
- The Pie Arsquare Bakery sold 869 pies during the month of January. What was the mean number of pies sold per day?

- Julie has taken 5 tests in science this semester. On the first three tests, her mean score was 70%. On the last two tests, her mean score was 90%. What is the mean of all five scores?

- On his trip to the mountains, Klink drove for 3 hours at an average speed of 50 mph, then for 2 hours at an average speed of 30 mph. What was his average speed for the entire trip?

- As an experiment, Rex tossed 3 coins together and counted the number of heads. He repeated the experiment 25 times. The outcomes are given in the table. What is the mode?

Tossing 3 Coins: Number of Heads				
2	0	2	3	2
1	3	2	0	1
2	2	1	1	2
0	3	1	2	1
2	1	1	2	3

- Marissa has taken four 100-point tests in math this semester. Her mean score is 89%.
 - How many points has she scored altogether on the four tests?
 - What score does she need on test #5 so that the mean of all five scores will be 90%?

S T H E U P T A L L O I F E W E T A S O Y E S

\$500	2	92	33.4 s	32.5 s	\$550	78	3215.8 lb	32.9 s	94	34.3 s	28	1	356	44 mph	33.8 s	3145.6 lb	76	33.6 s	42 mph	\$580	39.8 s	\$780
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p 39
Simple probability: $\frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$

$$P(\text{red}): \frac{1}{4}$$

$$P(5) \frac{1}{6}$$

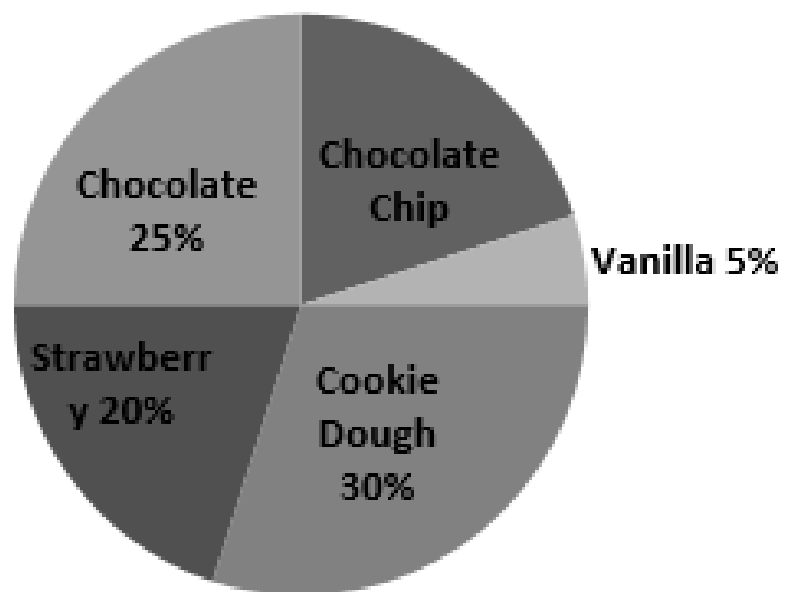
$$P(\text{odd}) \frac{3}{6} = \left(\frac{1}{2}\right)$$

$$P(\text{not 3 or 4})$$

$$\frac{4}{6} = \left(\frac{2}{3}\right)$$

Favorite Ice-Cream Flavors

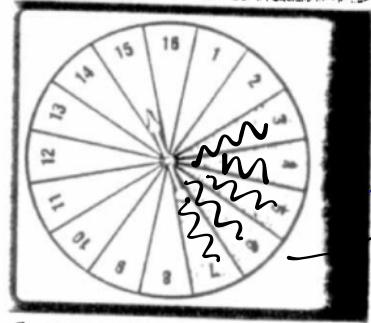
#5



Simple Probability

Probability is the chance an event will happen.
 It can be expressed as a fraction, decimal, or percent!

A spinner like the one shown is used in a game. Determine the probability of each outcome if the spinner is equally likely to land on each section. Express each probability as a **fraction** as a **percent**.



- | | | |
|---------------------------------|-------------------------------|-------------------------|
| 1. $P(15)$ | 2. $P(\text{even})$ | |
| 3. $P(\text{greater than } 10)$ | 4. $P(\text{perfect square})$ | 5. $P(1 \text{ or } 2)$ |
| 6. $P(\text{less than } 9)$ | 7. $P(\text{not shaded})$ | 8. $P(\text{shaded})$ |

Red

There are 8 marbles, 5 blue marbles, 11 green marbles, and 1 yellow marble in a bag. Suppose one marble is selected at random. Find the probability of each outcome. Expression each probability as a **fraction** and a **percent**.

- | | | |
|-----------------------------|-----------------------|-------------------------------------|
| 9. $P(\text{red})$ | 10. $P(\text{blue})$ | 11. $P(\text{yellow})$ |
| 12. $P(\text{red or blue})$ | 13. $P(\text{black})$ | 14. $P(\text{red, blue, or green})$ |

A box contains 6 black crayons, 4 blue crayons, 5 red crayons, 3 yellow crayons, and 2 white crayons. One crayon is chosen at random. Write each probability as a **fraction** and a **percent**.

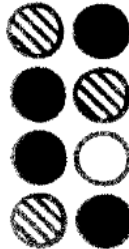
- | | | |
|-----------------------|-------------------------------|--------------------------------------|
| 15. $P(\text{black})$ | 16. $P(\text{blue})$ | 17. $P(\text{not white})$ |
| 18. $P(\text{pink})$ | 19. $P(\text{black or blue})$ | 20. $P(\text{blue, red, or yellow})$ |

What Can You Say About Playing Professional Hockey?

Do each exercise and find your answer in the set of answers under that exercise. Cross out the letter above each correct answer.

1. Find each probability if you choose one marble at random.

- a. $P(\text{white})$
- b. $P(\text{black})$
- c. $P(\text{striped})$
- d. $P(\text{not white})$
- e. $P(\text{white or black})$



2. Suppose you roll a regular 6-faced die 600 times. About how many times would you expect to get:

- a. a 4?
- b. an odd number?

3. If you spin the spinner once, what is the probability that it will stop on \$20?



4. If you spin this spinner 100 times, about how many times would you expect it to stop on \$20?

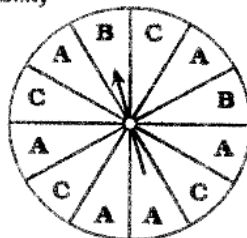
5. Suppose a bag contains 7 purple cubes, 3 green cubes, and 5 yellow cubes. Find each probability if you choose one cube at random.

- a. $P(\text{purple})$
- b. $P(\text{green})$
- c. $P(\text{yellow})$
- d. $P(\text{not green})$

T	H	I	S	A	T	R	E	A	S	T	O	A	R	O	U	N	D
$\frac{5}{8}$	$\frac{1}{3}$	$\frac{2}{5}$	25	$\frac{1}{2}$	$\frac{2}{3}$	$\frac{7}{8}$	$\frac{4}{5}$	$\frac{1}{4}$	150	$\frac{1}{5}$	$\frac{1}{8}$	$\frac{11}{15}$	$\frac{7}{15}$	100	$\frac{3}{8}$	40	300

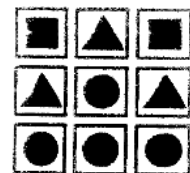
6. Find each probability if you spin the spinner once.

- a. $P(A)$
- b. $P(B)$
- c. $P(C)$



8. Find each probability if you choose one card at random.

- a. $P(\text{circle})$
- b. $P(\text{circle or square})$



7. Suppose you spin this spinner 60 times. About how many times would you expect it to stop on:

- a. A?
- b. B?
- c. C?

9. A traffic signal is green for 20 seconds, then yellow for 5 seconds, then red for 25 seconds. When you reach the signal, what is the probability it is green?

10. If you toss a coin 1000 times, about how many heads would you expect?

P	I	N	S	C	O	R	E	J	A	R	O	N	I	B	E
$\frac{4}{9}$	$\frac{3}{4}$	500	$\frac{1}{3}$	250	20	$\frac{2}{5}$	$\frac{3}{10}$	25	$\frac{1}{2}$	10	40	$\frac{2}{3}$	$\frac{1}{6}$	$\frac{3}{5}$	30

Statistics and Probability IXL 6th Grade

HH.3

II.4

