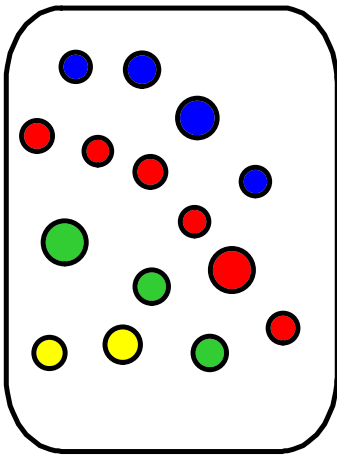


back of 38



Use the jar of marbles to find each probability.

$$P(\text{blue}): \frac{4}{15}$$

$$P(\text{red}): \frac{6}{15} = \frac{2}{5}$$

$$P(\text{green}): \frac{3}{15} = \frac{1}{5}$$

$$P(\text{yellow}): \frac{2}{15}$$

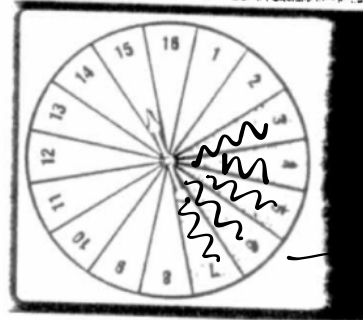
$$P(\text{blue or green}): \frac{7}{15}$$

$$P(\text{red or yellow}): \frac{8}{15}$$

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. $P(15)$ $\frac{1}{16}$ 6.25%

2. $P(\text{even})$ $\frac{1}{2}$ 50%

3. $P(\text{greater than } 10)$ $\frac{3}{8}$ 37.5%

4. $P(\text{perfect square})$ $\frac{1}{4}$ 25%

5. $P(1 \text{ or } 2)$ $\frac{1}{8}$ 12.5%

6. $P(\text{less than } 9)$ $\frac{1}{2}$ 50%
Red

7. $P(\text{not shaded})$ $\frac{11}{16}$ 68.8%

8. $P(\text{shaded})$ $\frac{5}{16}$ 31.3%

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. $P(\text{red})$ $\frac{8}{25}$ 32%

10. $P(\text{blue})$ $\frac{1}{5}$ 20%

11. $P(\text{yellow})$ $\frac{1}{25}$ 4%

12. $P(\text{red or blue})$ $\frac{13}{25}$ 52%

13. $P(\text{black})$ 0

14. $P(\text{red, blue, or green})$ $\frac{24}{25}$ 96%

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. $P(\text{black})$ $\frac{3}{10}$ 30%

16. $P(\text{blue})$ $\frac{1}{5}$ 20%

17. $P(\text{not white})$ $\frac{9}{10}$ 90%

18. $P(\text{pink})$ 0

19. $P(\text{black or blue})$ $\frac{1}{2}$ 50%

20. $P(\text{blue, red, or yellow})$ $\frac{3}{5}$ 60%

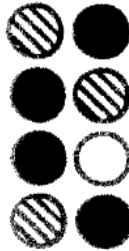
What Can You Say About Playing Professional Hockey?

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

ITS AN ICE JOB

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

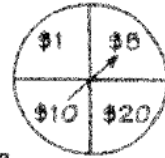
- a. P(white)
- b. P(black)
- c. P(striped)
- d. P(not white)
- e. P(white or black)



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?

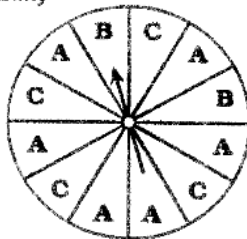
5. Suppose a bag contains 7 purple cubes, 3 green cubes, and 5 yellow cubes. Find each probability if you choose one cube at random.

- a. P(purple)
- b. P(green)
- c. P(yellow)
- d. P(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

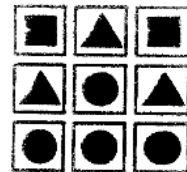
6. Find each probability if you spin the spinner once.

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



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

- a. P(circle)
- b. P(circle or square)



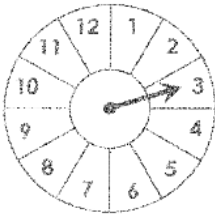
7. Suppose you spin this spinner 60 times. About how many times would you expect it to stop on:

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

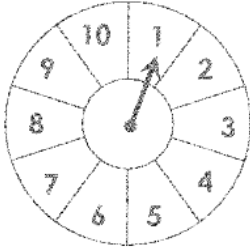
9. A traffic signal is green for 20 seconds, then yellow for 5 seconds, then red for 25 seconds. When you reach the signal, what is the probability it is green?

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

Name:		Date:
Topic:		Class:
Main Ideas/Questions	Notes/Examples	
EXPERIMENT	<p>A procedure with varying results</p> <p>Example: rolling a die</p>	
OUTCOME	<p>A possible result from the experiment</p> <p>Example: 4</p>	
SAMPLE SPACE	<p>The set of all possible outcomes</p> <p>Example: {1, 2, 3, 4, 5, 6}</p>	
EVENT	<p>A certain desired outcome</p> <p>Example: Rolling an odd number</p>	
FAVORABLE OUTCOMES	<p>All possible outcome for an event</p> <p>Example: {1, 3, 5}</p>	
<p>Identifying Outcomes</p> 	<p>1. A letter from the word BASKETBALL is chosen at random. List the possible outcomes.</p>	<p>List the favorable outcomes for:</p> <p>a) choosing K K</p> <p>b) not choosing B ASKETALL</p> <p>c) choosing an T or a L TLL</p> <p>d) choosing a vowel A E A</p>
	<p>2. The spinner to the left is spun once. List the possible outcomes.</p>	<p>List the favorable outcomes for:</p> <p>a) spinning an even number 2 4 6 8 10 12</p> <p>b) spinning a number greater than 10 11 12</p> <p>c) spinning a number that is at most 5 1 2 3 4 5</p> <p>d) spinning a prime number 2 3 5 7 11</p>

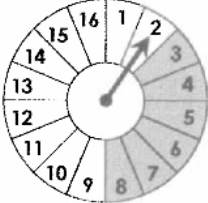
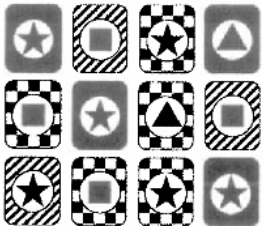
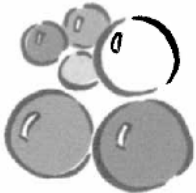
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Name:		Date:
Topic:		Class:
Main Ideas/Questions	Notes/Examples	
PROBABILITY	<ul style="list-style-type: none"> Probability is a measure of the <u>chance</u> that a specific <u>event</u> will occur. Probabilities have values between <u>0</u> and <u>1</u>. An event that is impossible has a probability of <u>0</u>. An event that is certain to occur has a probability of <u>1</u>. 	
FINDING PROBABILITY	<p>When all outcomes are equally likely, the probability of an event, $P(\text{event})$, is the ratio of the number of favorable outcomes to the total number of outcomes.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $P(\text{event}) = \frac{\text{number of favorable outcomes}}{\text{number of total outcomes}}$ </div> <p>Probabilities can be written as fractions, decimals, or percent!</p>	
EXAMPLES	<p>Directions: Find each probability as a fraction (in simplest form), decimal, and percent.</p> <p>1. The spinner below is spun once.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>a) $P(\text{odd})$ $\frac{5}{10} = \frac{1}{2} = 50\%$</p> <p>b) $P(\text{multiple of 4})$ $\frac{2}{10} = \frac{1}{5} = .2 = 20\%$</p> <p>c) $P(\text{prime number})$ $\frac{4}{10} = \frac{2}{5} = .4 = 40\%$</p> <p>d) $P(\text{even or greater than 5})$ $\frac{7}{10} = .7 = 70\%$</p> </div> </div> <p>2. A letter from the word ACCELERATION is chosen at random.</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>a) $P(R)$ $\frac{1}{12} = .08\bar{3} = 8.3\%$</p> <p>b) $P(C)$ $\frac{2}{12} = \frac{1}{6} = .16\bar{6} = 16.6\%$</p> <p>c) $P(\text{not a vowel})$ $\frac{6}{12} = \frac{1}{2} = .5 = 50\%$</p> <p>d) $P(L, R, \text{ or } A)$ $\frac{4}{12} = \frac{1}{3} = .3\bar{3} = 33.3\%$</p> </div> <div style="margin-right: 20px;"> <p>(12)</p> </div> </div>	

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Why Did the Teacher Jump in the Pool?

Directions: Find each probability. After completing each set, find matching answers between Column 1 and Column 2. One will have a letter and the other a number. Write the letter in the matching numbered box at the bottom of the page.

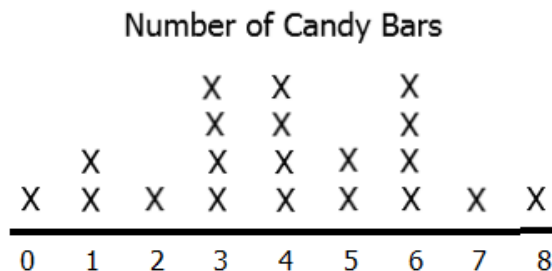
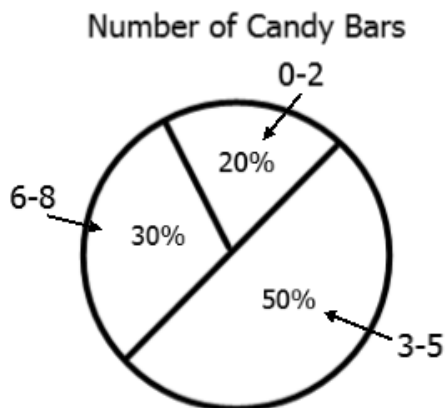
		COLUMN 1	COLUMN 2
SET 1	<p>The spinner below is spun once.</p> 	T $P(\text{even})$	9 $P(\text{unshaded})$
		E $P(\text{at least } 7)$	7 $P(10 \text{ or a multiple of } 3)$
		T $P(\text{prime})$	2 $P(\text{shaded and at most } 4)$
		O $P(\text{multiple of } 5 \text{ and odd})$	12 $P(\text{less than } 9)$
SET 2	<p>The set of cards below has 3 background styles (solid, stripes, and checkered) and 3 shapes (stars, squares, and triangles). One card is chosen at random.</p> 	W $P(\text{stripes})$	6 $P(\text{a triangle})$
		T $P(\text{a star})$	10 $P(\text{solid and a star})$
		R $P(\text{solid or checkered})$	1 $P(\text{a square or a triangle})$
		T $P(\text{checkered and a square})$	4 $P(\text{stripes and a star})$
		E $P(\text{solid and a triangle})$	14 $P(\text{checkered or a star})$
SET 3	<p>There are 2 blue, 6 yellow, 10 red, and 3 green, 5 orange, and 4 purple marbles in a jar. One marble is chosen at random.</p> 	S $P(\text{red})$	11 $P(\text{orange})$
		E $P(\text{red, yellow, or purple})$	3 $P(\text{yellow})$
		A $P(\text{green or blue})$	13 $P(\text{not red})$
		H $P(\text{orange, purple, or yellow})$	5 $P(\text{purple or yellow})$
		T $P(\text{blue or purple})$	8 $P(\text{blue, red, or green})$

ANSWER:

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	!
----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	---

P.4)

- 8) Below shows a circle graph and a line plot based on the number of candy bars each student brought in for a class project. Determine if the information in the circle graph represents the same data in the line plot. Explain your reasoning in the box below.

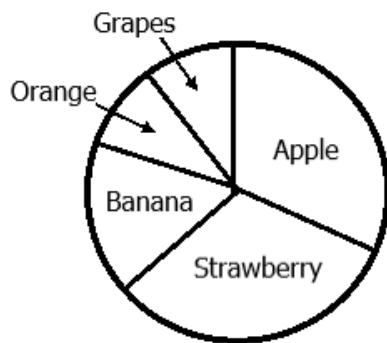


- 7) Below shows a circle graph and a pictograph based on the number of cookie boxes a Girl Scout sold. Determine if the information in the circle graph represents the same data in the pictograph. Explain your reasoning in the box below.

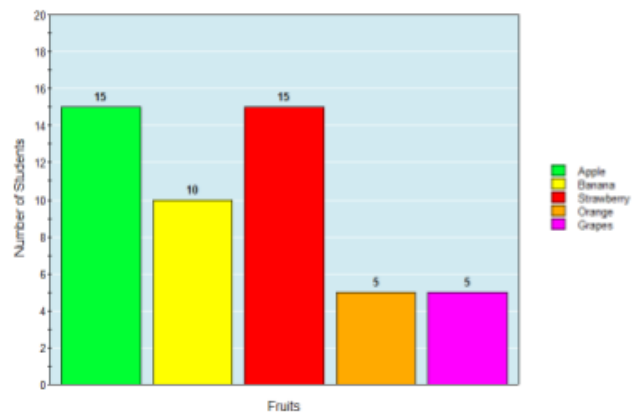


- 9) Below shows a circle graph and a bar based on the favorite fruits of 50 students. Determine if the information in the circle graph represents the same data in the bar graph. Explain your reasoning in the box below.

Favorite Fruits of Students



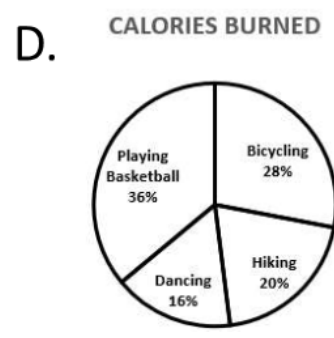
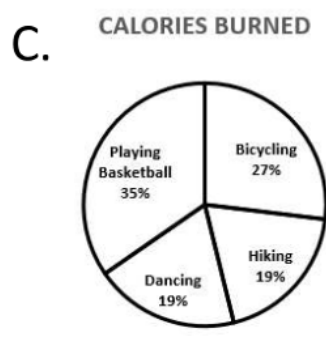
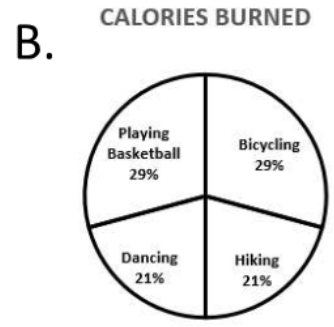
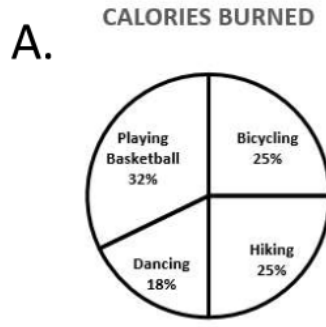
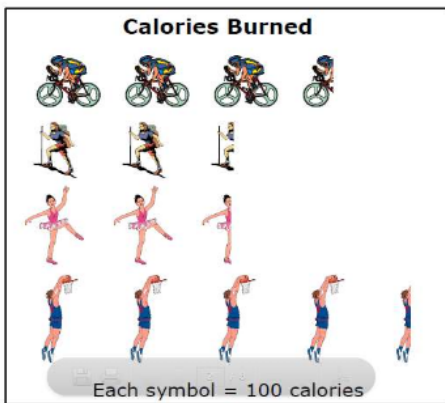
Favorite Fruits of Students



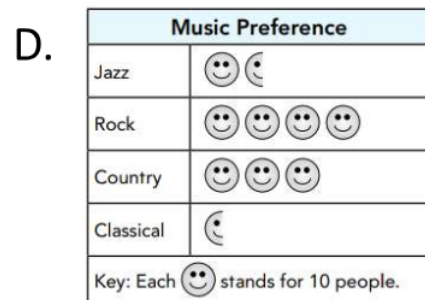
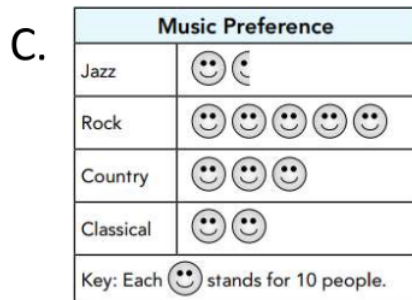
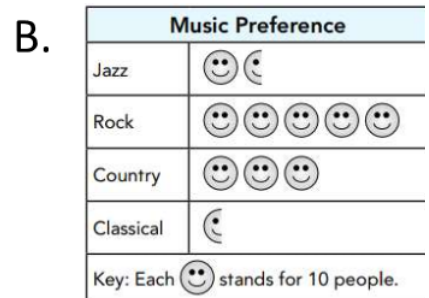
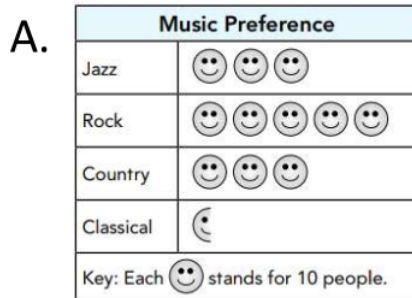
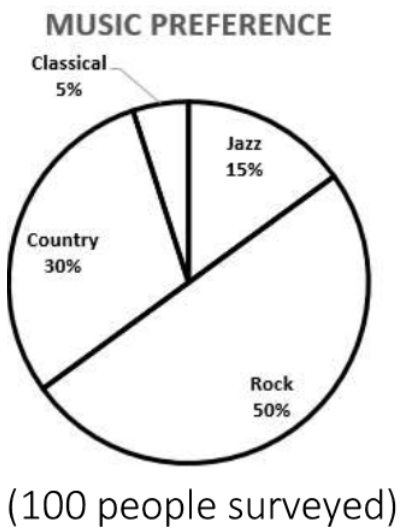
Open Google Classroom and Comparing Graphs

Complete on
notebook page 41

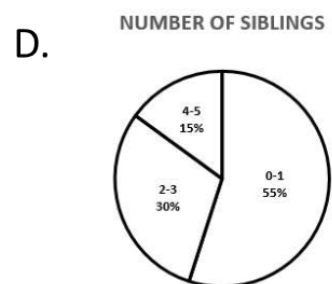
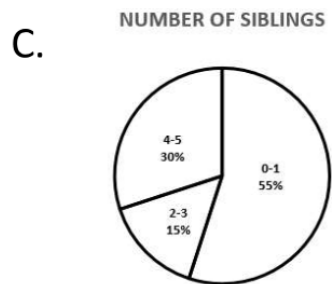
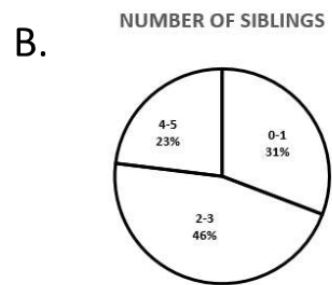
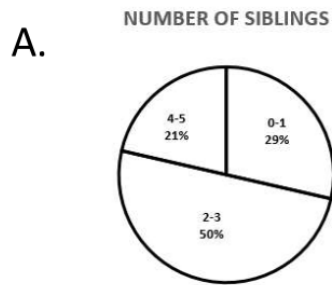
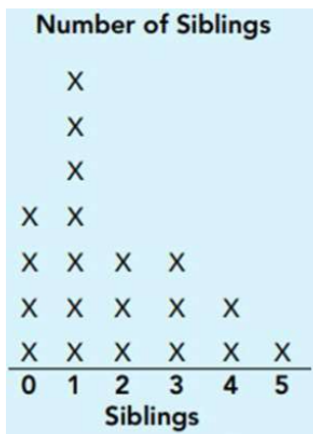
Which circle graph shows the same information as the pictograph?



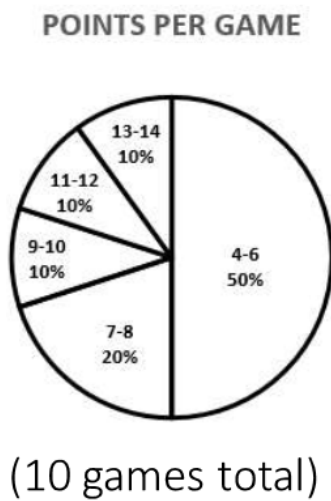
Which pictograph shows the same information as the circle graph?



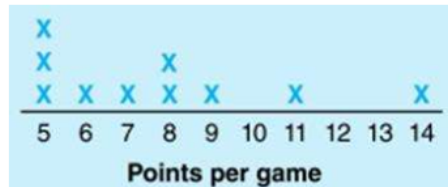
Which circle graph shows the same information as the line plot?



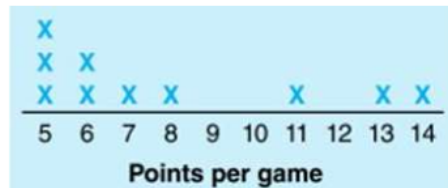
Which line plot shows the same information as the circle graph?



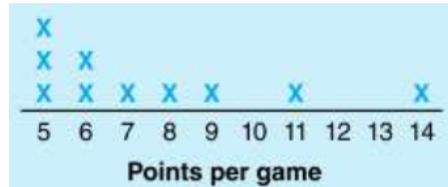
A.



B.



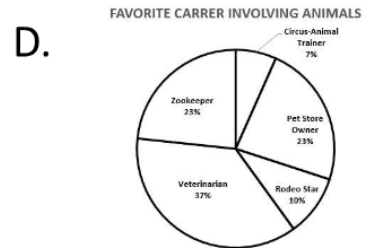
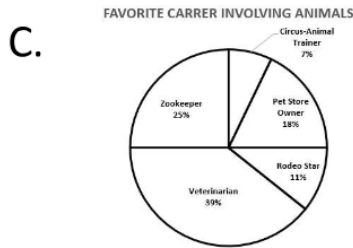
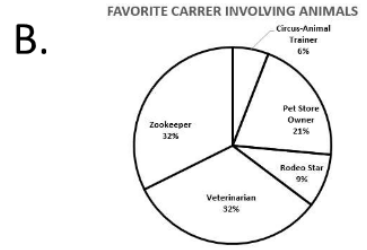
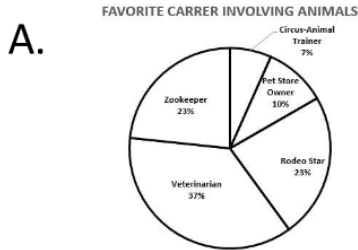
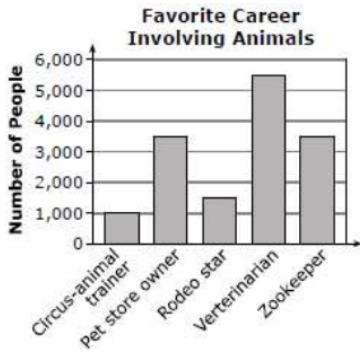
C.



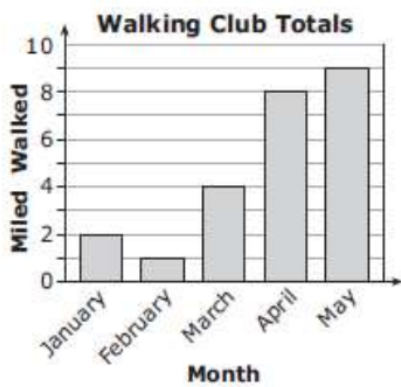
D.



Which circle graph shows the same information as the bar graph?

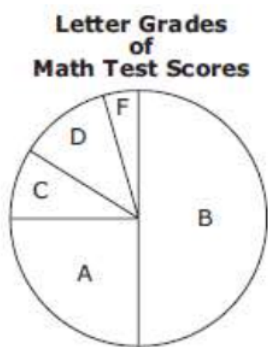


Which circle graph shows the same information as the bar graph?

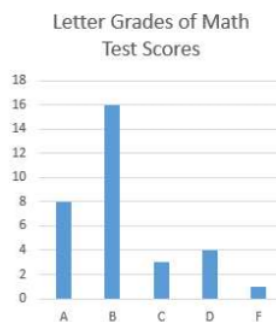


- A. **WALKING CLUB TOTALS**
-
- | Month | Percentage |
|----------|------------|
| May | 40% |
| April | 32% |
| March | 16% |
| January | 8% |
| February | 4% |
- B. **WALKING CLUB TOTALS**
-
- | Month | Percentage |
|----------|------------|
| May | 32% |
| April | 40% |
| March | 16% |
| January | 8% |
| February | 4% |
- C. **WALKING CLUB TOTALS**
-
- | Month | Percentage |
|----------|------------|
| May | 38% |
| April | 31% |
| March | 15% |
| January | 8% |
| February | 8% |
- D. **WALKING CLUB TOTALS**
-
- | Month | Percentage |
|----------|------------|
| May | 34% |
| April | 28% |
| March | 28% |
| January | 7% |
| February | 3% |

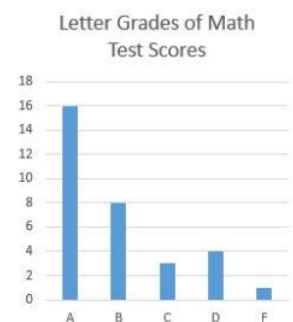
Which bar graph shows the same information as the circle graph?



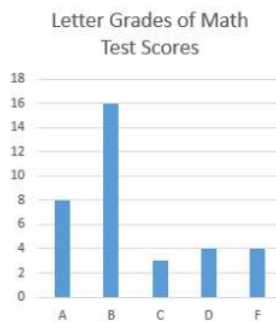
A.



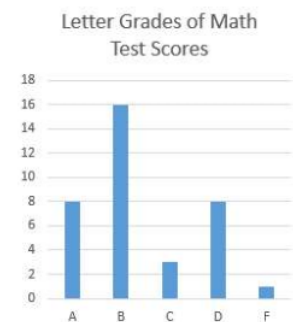
B.



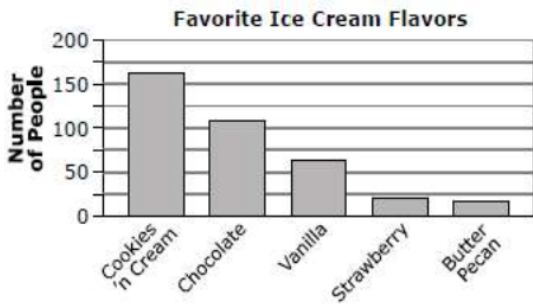
C.



D.



Which circle graph shows the same information as the bar graph?



A Favorite Ice Cream Flavors



B Favorite Ice Cream Flavors



C Favorite Ice Cream Flavors



D Favorite Ice Cream Flavors



