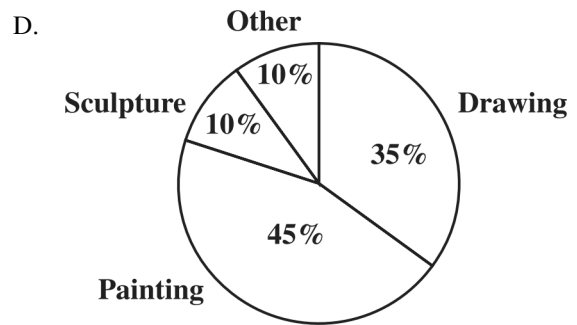
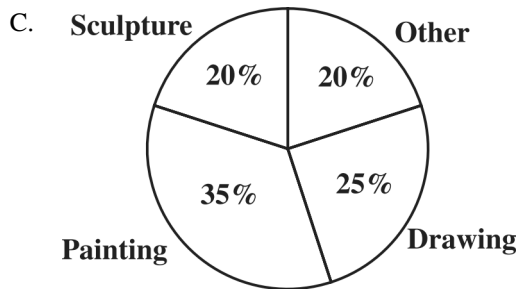
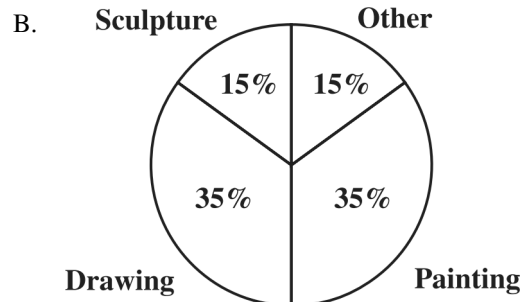
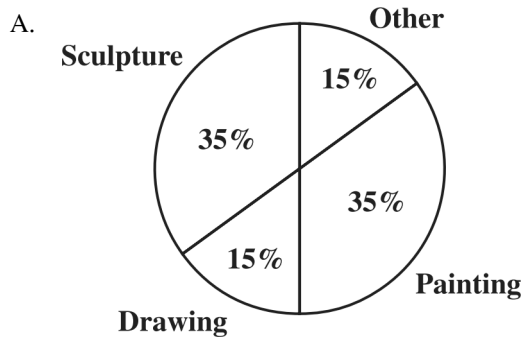


3. The students at a high school were asked to name their favorite type of art. The table below shows the results of the survey.

Art Survey

Type of Art	Number of Students
Painting	714
Drawing	709
Sculpture	296
Other	305

Which circle graph *best* shows these data?



4. The table shows the elevations (heights above sea level) and average high temperatures for five cities in California during the month of February.

California Cities	Height Above Sea Level	Average High Temperature for February
California City	2,300 ft	62°F
Death Valley	-282 ft	73°F
Independence	4,121 ft	60°F
Los Angeles	256 ft	70°F
San Bernardino	1,350 ft	69°F

What conclusion about the average high temperature can be drawn from these data?

- A. The elevation of the city is unrelated to the temperature.
- B. The lower the elevation of the city, the lower the temperature.
- C. The greater the elevation of the city, the lower the temperature.
- D. The greater the elevation of the city, the greater the temperature.
5. Look at this table.

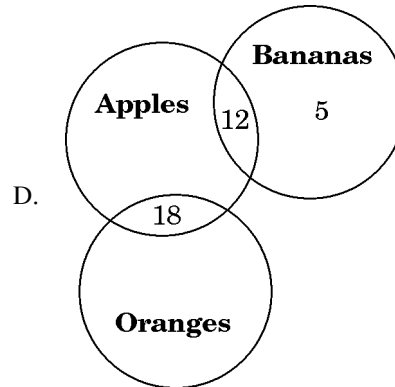
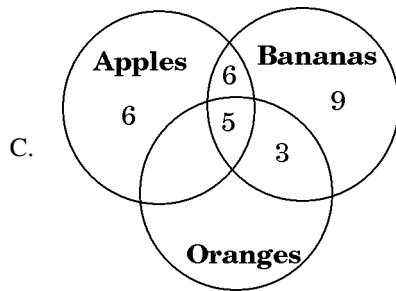
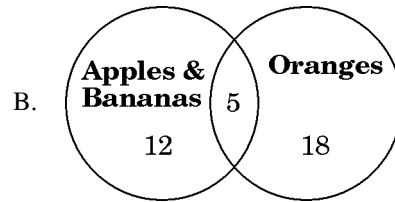
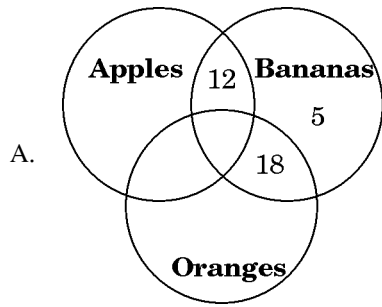
Client Charges

Client	Hours	Charge
Angie	2.0	\$40.00
Dave	1.5	\$32.50
Frank	3.0	\$55.00
Carrie	0.5	\$17.50
Deb	2.5	\$47.50

Yoshi is a personal trainer. The table shows how much he charges his clients. Yoshi has two new clients, Wayne and Emily. He worked with Wayne one more hour than he did with Emily. How much more money did Yoshi charge Wayne than he charged Emily?

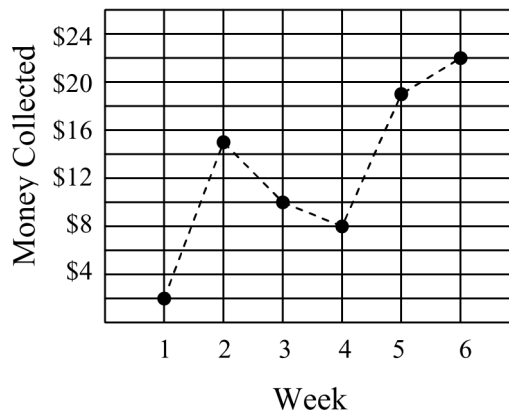
- A. \$15.00 B. \$20.00 C. \$25.00 D. \$35.00

6. A survey showed that 12 students in Mrs. Scott's class liked apples and bananas but not oranges, 18 students liked oranges and bananas but not apples, and five students liked only bananas. Which Venn diagram shows this?



7. The graph below displays the amount of money collected by Mrs. Rice's class for "Pennies for Pets."

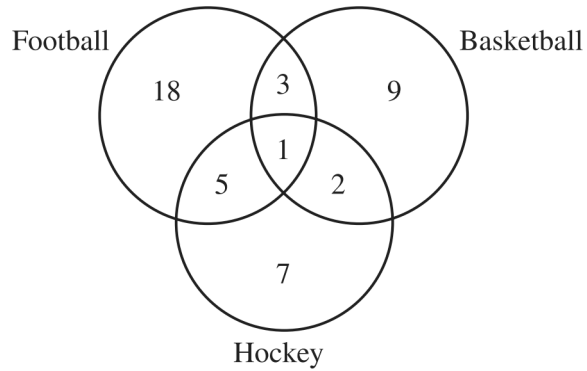
Pennies for Pets



During which two-week period did the amount of money collected decrease the most?

- A. Week 2 and Week 3 B. Week 4 and Week 5 C. Week 1 and Week 2 D. Week 3 and Week 4

8. Coach Wilson constructed a Venn diagram that shows the number of eighth-grade athletes who play football, basketball, and hockey.



Which phrase best identifies the number 5 shown in the diagram?

- A. the total number of athletes who do not play all three sports
- B. the total number of athletes who play both football and hockey, but not basketball
- C. the total number of athletes who play either football or hockey, but not both
- D. the total number of athletes who do not play basketball

9. Mr. Logan made this frequency table to organize his students' test scores.

TEST SCORES

Score	Frequency
90–100	16
80–89	9
70–79	2
60–69	2

Mr. Logan wants to add these test scores to his frequency table.

95 65 80 75 100 65

Which frequency table displays all of Mr. Logan's test score data?

A. **TEST SCORES**

Score	Frequency
90–100	19
80–89	11
70–79	4
60–69	2

B. **TEST SCORES**

Score	Frequency
90–100	17
80–89	10
70–79	3
60–69	3

C. **TEST SCORES**

Score	Frequency
90–100	18
80–89	10
70–79	3
60–69	4

D. **TEST SCORES**

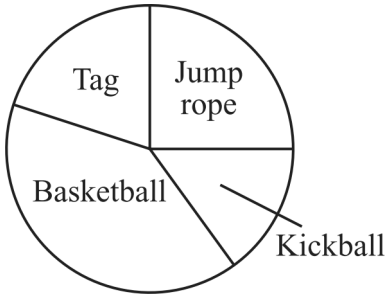
Score	Frequency
90–100	18
80–89	9
70–79	3
60–69	2

10. The 20 students in a class wrote the names of their favorite recess activities on cards, as shown below.

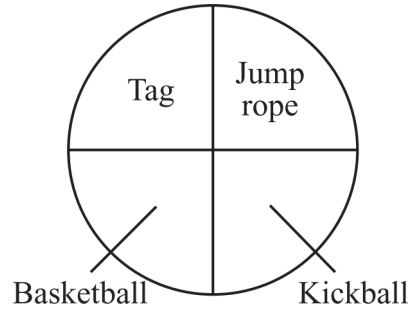
Kickball	Jump rope	Tag	Basketball	Jump rope
Kickball	Basketball	Basketball	Jump rope	Tag
Basketball	Jump rope	Basketball	Basketball	Kickball
Tag	Tag	Jump rope	Basketball	Basketball

Which circle graph best represents the favorite recess activities of the students?

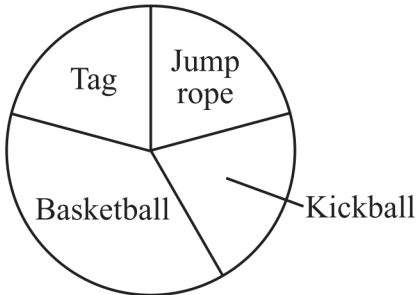
A. **Favorite Recess Activities**



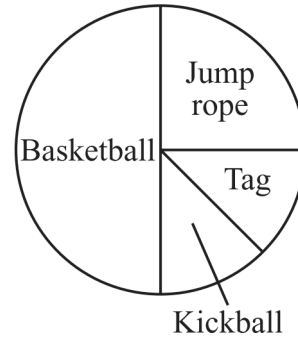
B. **Favorite Recess Activities**



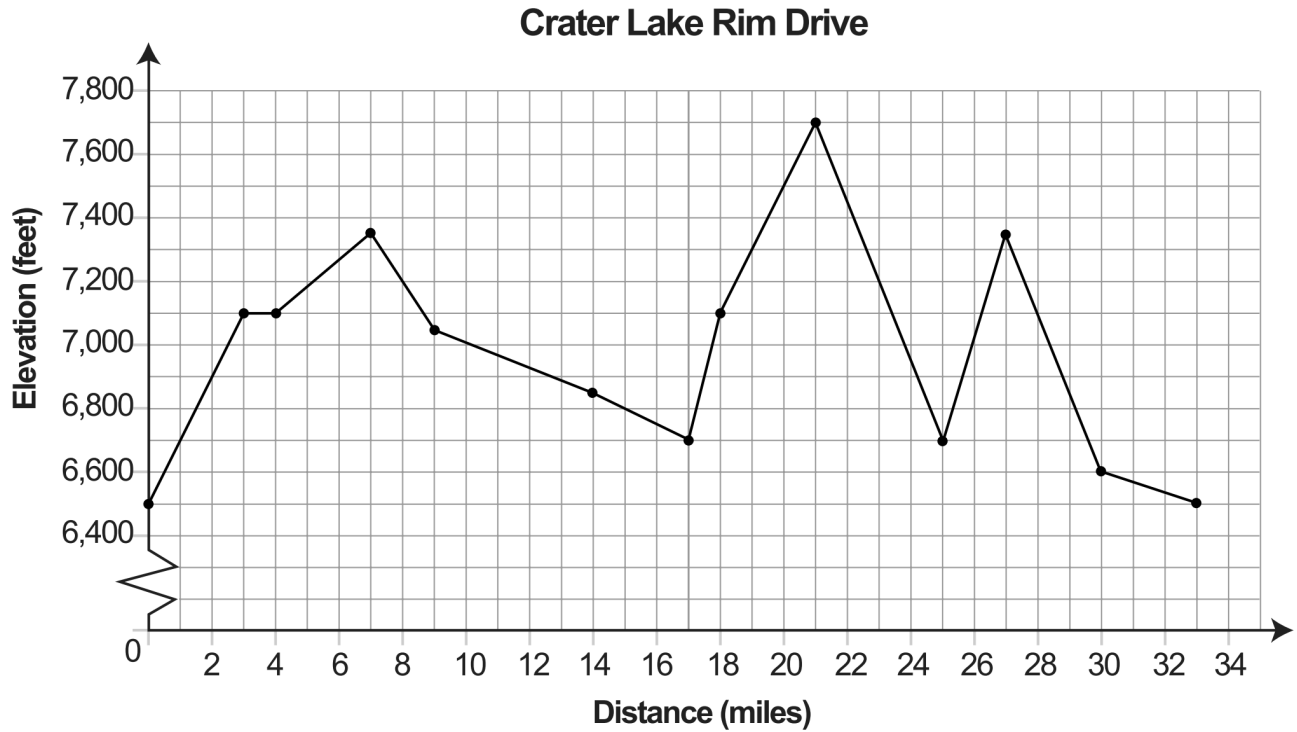
C. **Favorite Recess Activities**



D. **Favorite Recess Activities**



11. Crater Lake's 33-mile Rim Drive is popular with cyclists. The graph below shows the elevation change between key points of interest along Rim Drive.



According to this graph, how many miles of Rim Drive are downhill?

12. Mr. Hong took a survey in which he asked each of the 30 students in his math class to choose his or her favorite food. He tallied the results in this chart.

Favorite Food

Food	Number of Students Choosing Food
Tacos	
Pizza	
French Fries	
Hot Dogs	
Hamburgers	

Mr. Hong wants to construct a circle graph for this data. What should be the measure of the angle for the section of the graph for hamburgers?

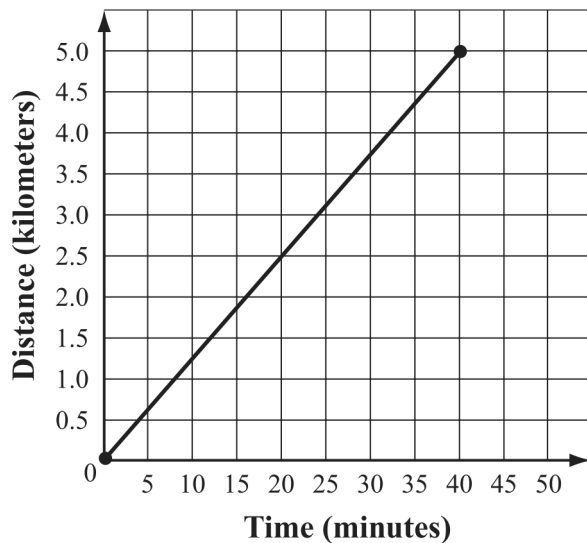
- A. 40° B. 56° C. 120° D. 96°

17. Tamar is creating a vertical bar graph to show how far each of her friends lives from school. The data are in the table shown.

Friend	1	2	3	4	5	6	7	8	9	10
Distance from School (miles)	7	8	9	9.5	6.5	16	7	7.5	8	10

What numbers are appropriate for Tamar to use to label the vertical axis to show all the data?

- A. 0 to 20 B. 1 to 10 C. 7 to 10 D. 7 to 16
18. On an exercise bicycle, Robin pedaled a total distance of 5 kilometers at a constant speed. The graph below shows the distance Robin pedaled over time.



How many minutes did it take Robin to pedal half the total distance?

- A. 20 minutes B. 25 minutes C. 30 minutes D. 35 minutes
19. Carolyn recorded the temperature, in degrees Fahrenheit, at noon on each day last week. The temperatures are shown in the box below.

77, 72, 81, 82, 77, 75, 69

She will make a stem-and-leaf plot to show the temperatures. Which numbers should Carolyn use for the **stems** in her plot?

- A. 6, 7, 8 B. 1, 2, 5, 7, 9 C. 1, 2, 5, 6, 7, 8, 9 D. 69, 72, 75, 77, 81, 82

20. For a project in his mathematics class, Tyrone surveyed 30 people at his school about the number of meals they had eaten at a restaurant last month. He recorded the results in the following histogram.



Tyrone makes a prediction that a person chosen at random will eat at least 3 meals at a restaurant next month.

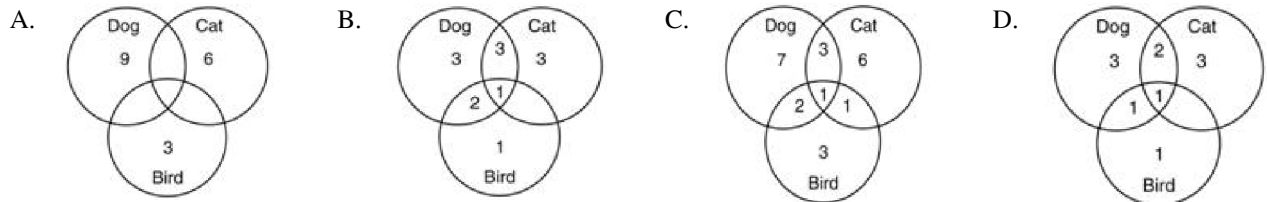
Based upon the information in the histogram, which statement best justifies Tyrone's prediction?

- A. The area for the middle interval is highest.
- B. The area for the outer intervals is smaller.
- C. The area for the first interval is the smallest.
- D. The area for the first three intervals increases.

21. Brett did a survey of the kind of pets his friends have. He recorded the results in this table.

Name	Dog	Cat	Bird
Jenny	X		
Kelly		X	
Mark	X		
David			X
Lisa	X	X	
Anne	X	X	X
Brian		X	
Chris	X		
Eddie	X		X
Gina		X	
Rachel	X	X	

Which Venn diagram represents the data in Brett's table?



22. The years of canoeing experience for each of 30 people who plan to go on a canoe trip are shown in the table below.

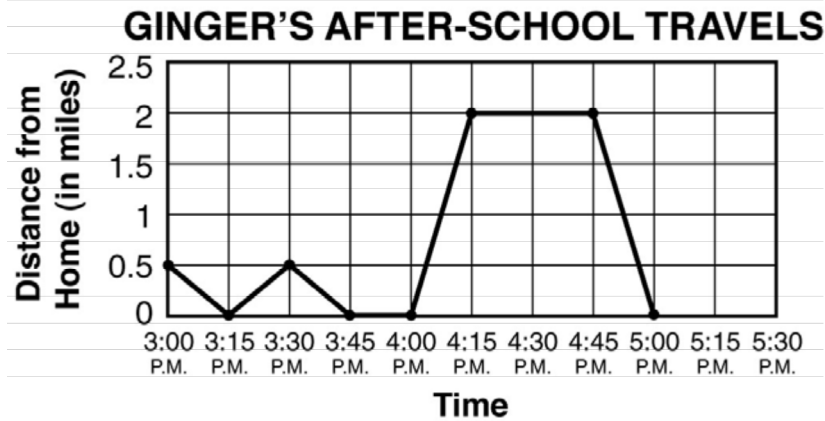
Years of Canoeing Experience

Number of Years	Number of People
Less than 3	9
3 through 6	12
More than 6 but less than 9	3
9 or more	6

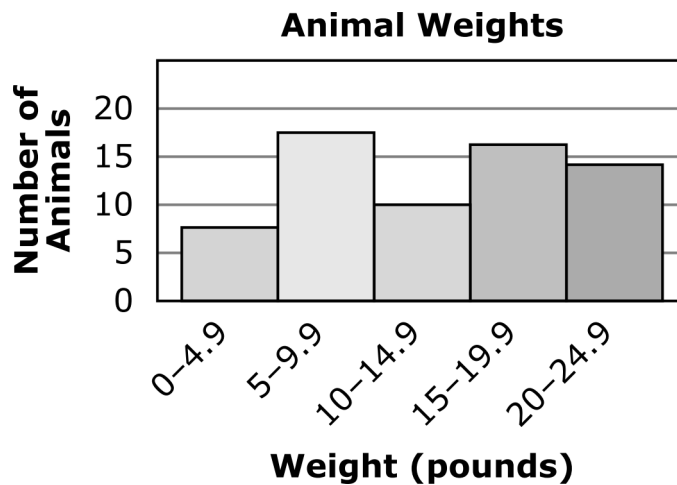
In a circle graph that correctly shows this data, what is the measure of the central angle of the sector labeled "9 or more"?

- A. 6° B. 20° C. 72° D. 108°

23. Ginger left school at 3:00pm and walked home, but went back to school for a book. She then walked home, had a snack, and took a bus downtown. Later, she took a bus home, arriving at 5:00pm Which of the following statements is true?



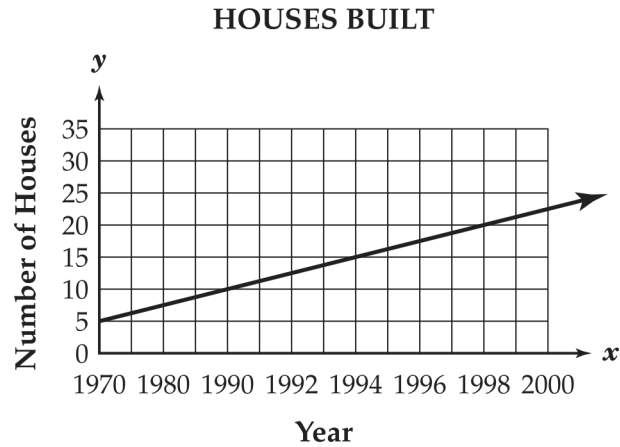
- A. Ginger's maximum distance from home was 2 miles.
- B. Ginger's minimum distance from home was 0.5 miles.
- C. At 3:30 pm, Ginger is at her furthest distance from home.
- D. At 4:30 pm, Ginger is back at her home.
24. A veterinarian recorded the weights of animals in a histogram.



Which question can be answered using the information from the histogram?

- A. How many animals weigh 4.9 pounds?
- B. How many animals weigh between 5 and 10 pounds?
- C. How many animals weigh less than 8 pounds?
- D. How many animals weigh at least 15 pounds?

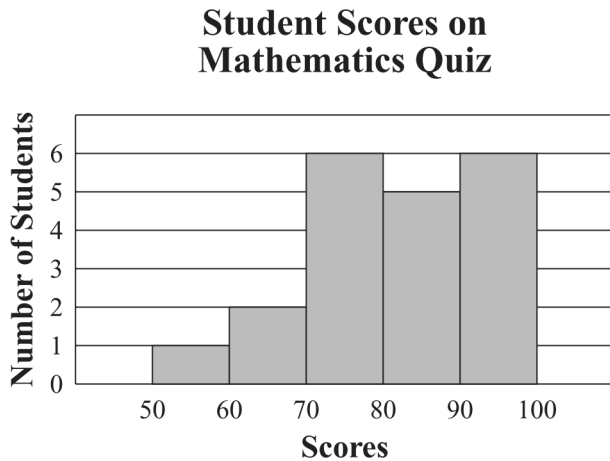
25. The graph below shows the number of new houses built in a town from 1970 to 2000.



The mayor of the town used the graph to claim that between 1970 and 2000 the number of new houses built increased at a constant rate. Is the claim valid?

- A. It is valid because the graph shows a constant rate of change.
- B. It is valid because 30 years is long enough to evaluate the increase.
- C. It is not valid because the scale on the vertical axis is inappropriate.
- D. It is not valid because the scale on the horizontal axis is inappropriate.

26. The histogram below shows the scores for all the students who took a mathematics quiz.



What percent of the students received a score of 80 or above?

- A. 55%
- B. 40%
- C. 25%
- D. 11%

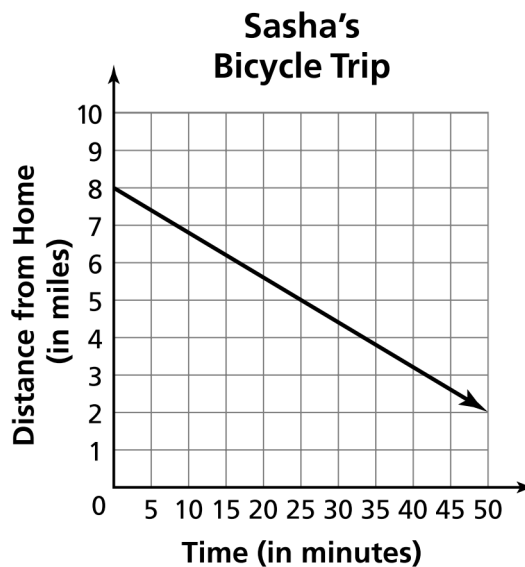
27. In order to plan her budget, Jazmin created a chart of her expenses for three months. After paying her bills and setting aside her savings, she spends what is left for entertainment and miscellaneous expenses.

MONTHLY BUDGET

Wages	Month	Car Payment	Gasoline	Car Insurance	Savings	Entertainment and Miscellaneous
\$489	May	213	56	67	75	78
\$511	June	213	64	67	75	92
\$504	July	213	49	67	75	100

Which of the following is true?

- A. Jazmin's wages vary monthly.
 - B. Jazmin has \$100 each month to spend for entertainment.
 - C. Jazmin's gas expenses have been consistently decreasing.
 - D. Jazmin's car payment is over 50% of her wages.
28. The graph below summarizes Sasha's bicycle trip.



Which statement *best* describes Sasha's bicycle trip?

- A. Sasha stopped riding her bike.
- B. Sasha stayed home and time ran out.
- C. Sasha rode her bicycle towards home.
- D. Sasha started her bicycle trip from home.

29. In Mrs. Harvey's class of 25 students, there are 9 students in the band, 10 students on the math team, 4 students who play basketball, and 5 students who play hockey. Which of the following do you know for sure about Mrs. Harvey's class?
- A. Some students do not participate in any of the activities named.
 - B. All of Mrs. Harvey's students participate in at least one of the activities named.
 - C. Some of Mrs. Harvey's students participate in more than one of the activities named.
 - D. There are students who participate in all four activities named.
30. Jamie collected data on the amount of time his classmates spent on telephone calls one day. The times ranged from 7 minutes to 116 minutes. He wants to make a histogram with four intervals.

Which set of intervals is *best* for Jamie's histogram?

- A. 0–30, 30–60, 60–90, 90–116
- B. 0–29, 30–58, 58–87, 87–116
- C. 0–39, 40–69, 70–99, 100–116
- D. 0–29, 30–59, 60–89, 90–116