

Divine Mercy Catholic Academy 8th Grade Summer Assignments

Welcome to an exciting year in 8th grade! This year brings many exciting events and decisions such as Confirmation, Ring Day, and High School choices just to name a few. High school choices will need to be made in the first trimester so take time over the summer to discuss your thoughts and preferences. Make sure to keep in mind the need to improve your math and reading skills in preparation for the coming school year.

We also suggest that you purchase a TACHS / Specialized High School prep book that your child should spend a few hours a week working in over the summer. A good Catholic High School book is McGraw Hill Catholic HS Exam. It can be found on Amazon, the link is:

[McGraw Hill Catholic High School Entrance Exams, Fifth Edition: Hanks, Wendy: 9781264285655: Amazon.com](https://www.amazon.com/dp/007141264285655)

A good Specialized High School Prep book is Apex SHSAT . It is found on Amazon, the link is:

https://www.amazon.com/SHSAT-Specialized-High-School-Admissions/dp/1637753934/ref=sr_1_1_sspa?crid=2KZD66G8HW5YB&keywords=specialized+public+high+school+exam+prep+book&did=16867062

The TACHS test is usually the first Saturday in November and the Specialized High School test is in October. We will work on High School Prep a few hours a week during September and October but it would be beneficial for the 8th graders to begin their preparation in the summer.

September will be the start of a year full of hard work, decisions, applications, and exciting events! We are looking forward to sharing the 2023 -2024 school year with you!

8th Grade Summer Assignments

The following assignments are due on the first day of school. They will be graded upon review in class and used as the first grade of the trimester. No assignment or part of an assignment is optional and late assignments will be penalized.

Math

1. Complete the attached worksheets.
2. Show all work on loose leaf with a proper heading.

Required Summer Reading:

- ***The Graveyard Book* by Neil Gaiman:** At the end of each chapter, write a summary of important events and details. A report will be written in class using these notes after a class discussion.

Even though one book is assigned it's expected that an 8th grader reads each day during summer vacation. You can read books, magazines, graphic novels, comic books, audiobooks, and more! There is more than one way to read and one type of book. Reading each day will help improve their reading skills for the year and the standardized tests. Prepare for the coming year, read, read, and read some more!

Enjoy your summer!!!!

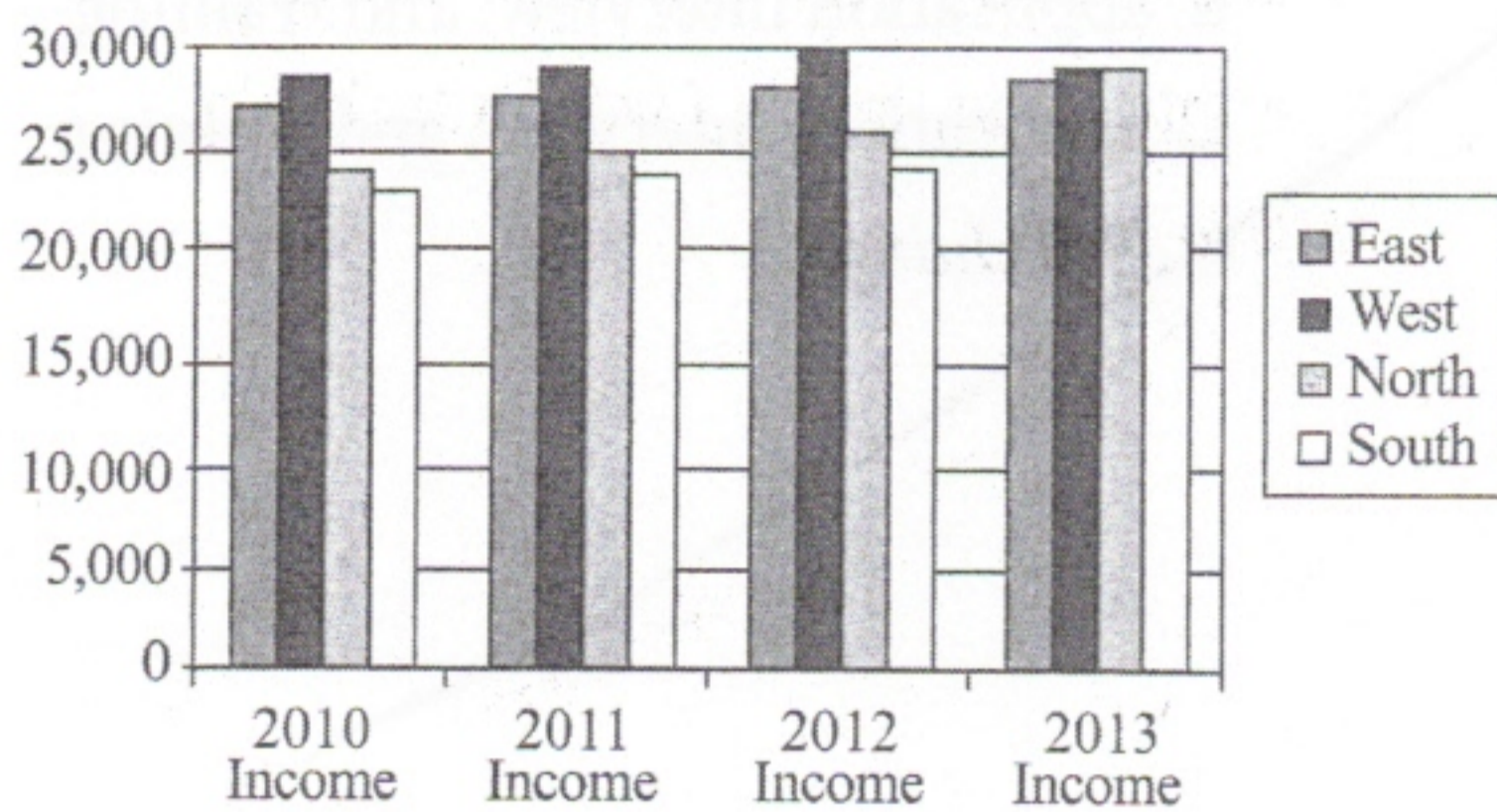
MATHEMATICS

50 Questions—40 Minutes

Turn to the Mathematics section of your answer sheet to answer the questions in this section.

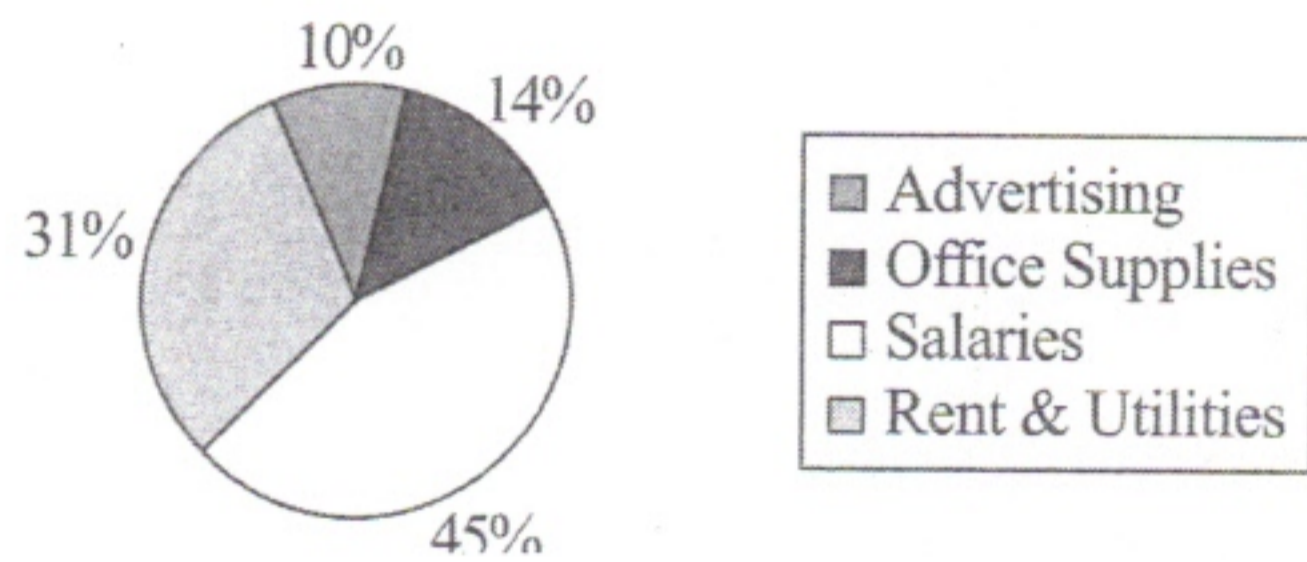
Directions: For questions 1–5, four answers are given for each problem. Choose the best answer.

1. According to the bar graph below, what was the approximate income of Southerners in 2013?



- A. \$25,000
- B. \$26,000
- C. \$27,000
- D. \$28,000

Use the following chart for Questions 2 and 3:

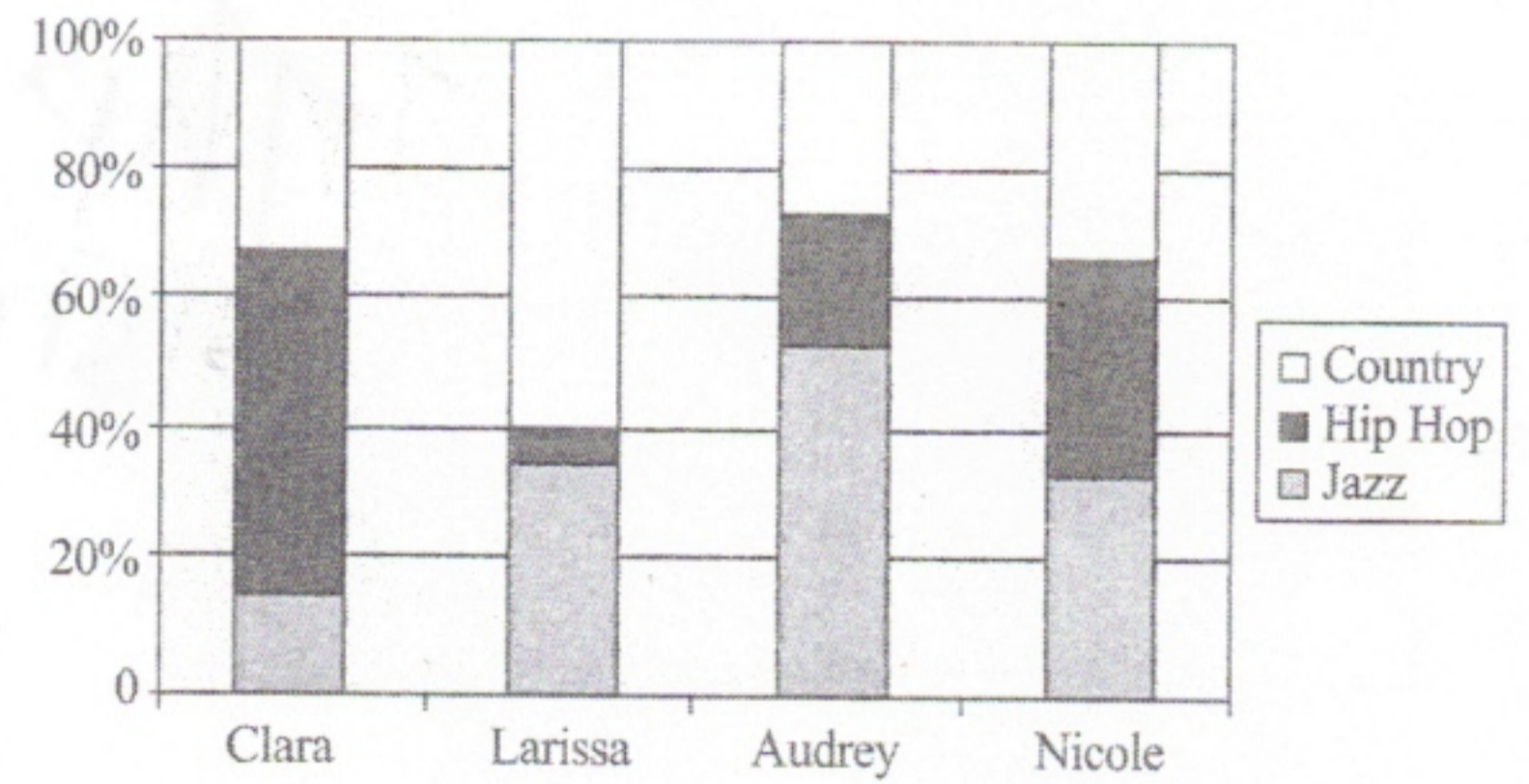


2. The pie chart below illustrates the proposed budget for a new company opening soon around the corner. Based on the information in the chart, what will be the most expensive part of running the new company?
- J. Advertising
 - K. Office Supplies
 - L. Salaries
 - M. Rent & Utilities

3. Which two items in the proposed budget when added together equal the amount spent on salaries?

- A. Advertising and Office Supplies
- B. Rent & Utilities and Office Supplies
- C. Advertising and Salaries
- D. Advertising and Rent & Utilities

Use the following chart for Questions 4 and 5:



4. The chart above represents the music collections of four high school seniors. Based on the information in the chart, which of the girls has a music collection composed of approximately 60 percent country music?
- J. Clara
 - K. Larissa
 - L. Audrey
 - M. Nicole

(1) If you've ever paid a visit to Buckingham Palace in London, England, you may have noticed the distinctive Queen's Guard, clad in red coats and large fur hats. (2) Many people are familiar with the daily Changing the Guard ceremony, a popular tourist spectacle that includes one regiment of soldiers marching to replace the regiment currently on duty, which lasts approximately 45 years. (3) These cavalry and infantry soldiers are charged with protecting the official residences of the royal family in the United Kingdom. (4) Those interested in becoming a member of the Queen's Guard must go through a rigorous application interview and training process.

49. What is the best way to write the underlined portion of sentence 2?

- A. 45 minutes
- B. 45 weeks
- C. 45 months
- D. (No change)

50. What is the best way to write the underlined portion of sentence 4?

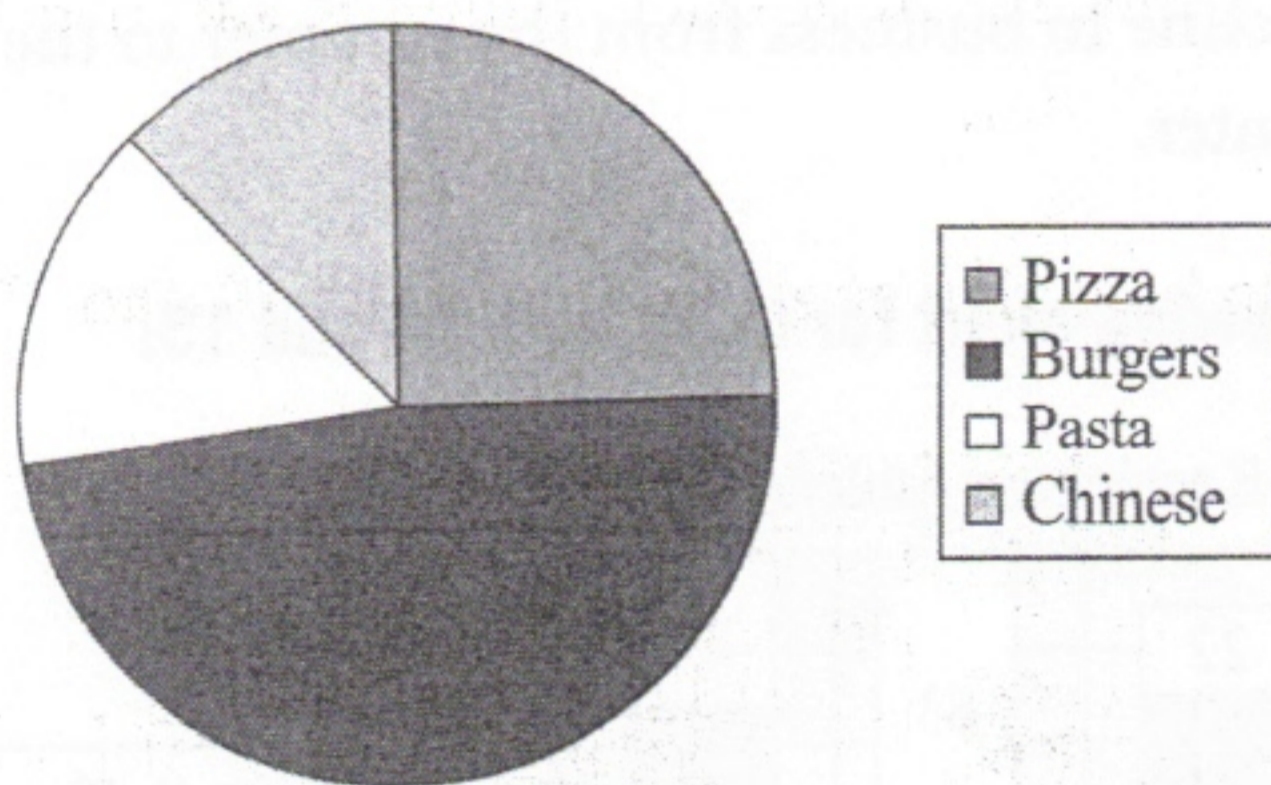
- J. "application interview and training"
- K. application interview; and training
- L. application, interview, and training
- M. (No change)

NOT
This
side

5. Based on the information in the chart, if all four collections are the same size, which girl seems to prefer jazz to both hip hop and country music?
- A. Clara
B. Larissa
C. Audrey
D. Nicole

Directions: For questions 6–10, estimate the answer in your head. No scratch work is allowed. Do *not* try to compute exact answers.

6. According to the chart, if 200 students were surveyed, about how many prefer pizza?

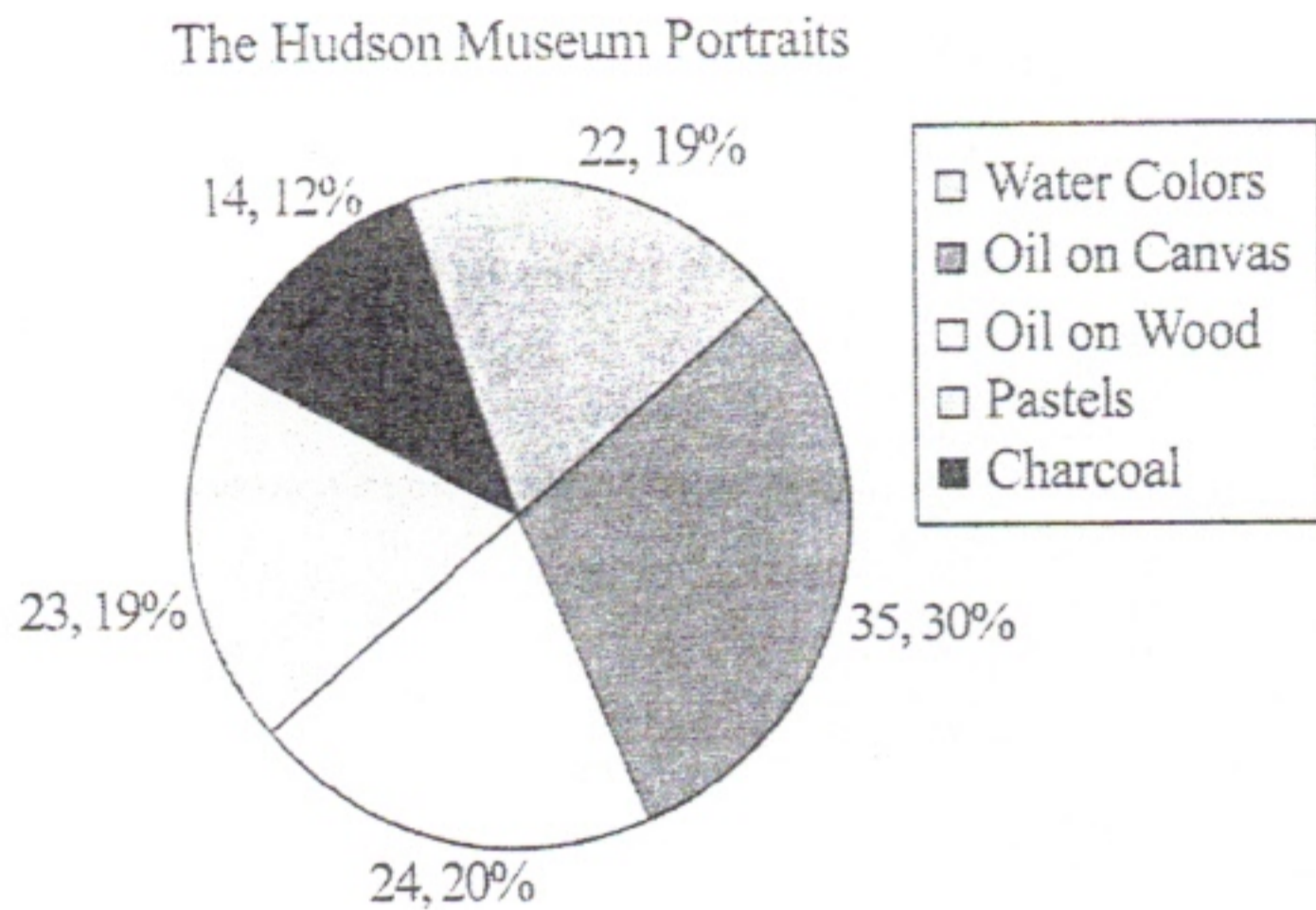


Favorite Foods of Millstone University Students

- J. 20
K. 25
L. 50
M. Not given
7. Most half-hour television shows are actually 23 minutes long once commercial time is deducted. If this is true, approximately how many seconds of commercials do viewers see in one half-hour show?
- A. 300
B. 400
C. 500
D. 600
8. The closest estimate of $43 + 71 + 19 + 68 + 11 + 29$ is _____.
- J. 200
K. 210
L. 240
M. 300
9. The closest estimate of $63,977 \div 7,991$ is _____.
- A. 8
B. 80
C. 256
D. Not given
10. The closest estimate of $414 - 289 - 106 + 89 + 277$ is _____.
- J. 300
K. 400
L. 500
M. 600

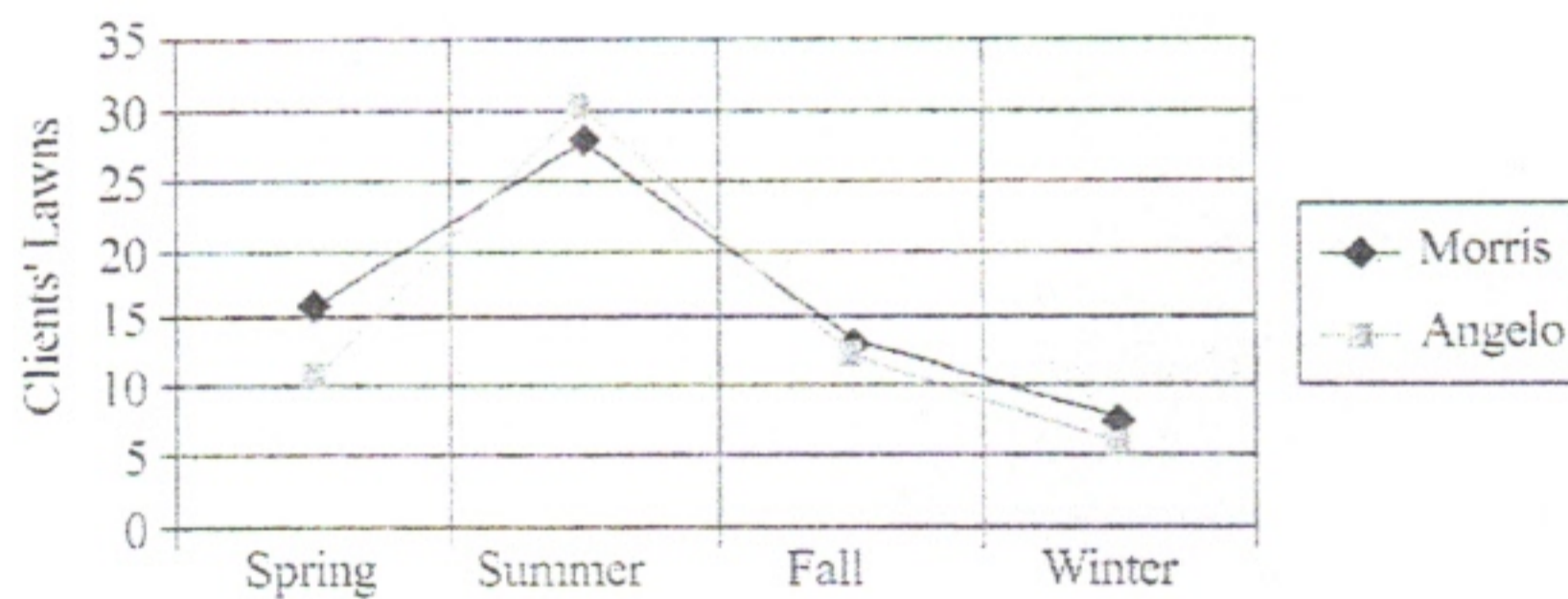
Directions: For questions 11–15, four answers are given for each problem. Choose the best answer.

11. The combination of which two portrait types make up half of the entire collection?



- A. Oil on Canvas and Oil on Wood
- B. Water Colors and Oil on Canvas
- C. Charcoal and Pastels
- D. Pastels and Water Colors

Use the following chart for Questions 12 and 13:

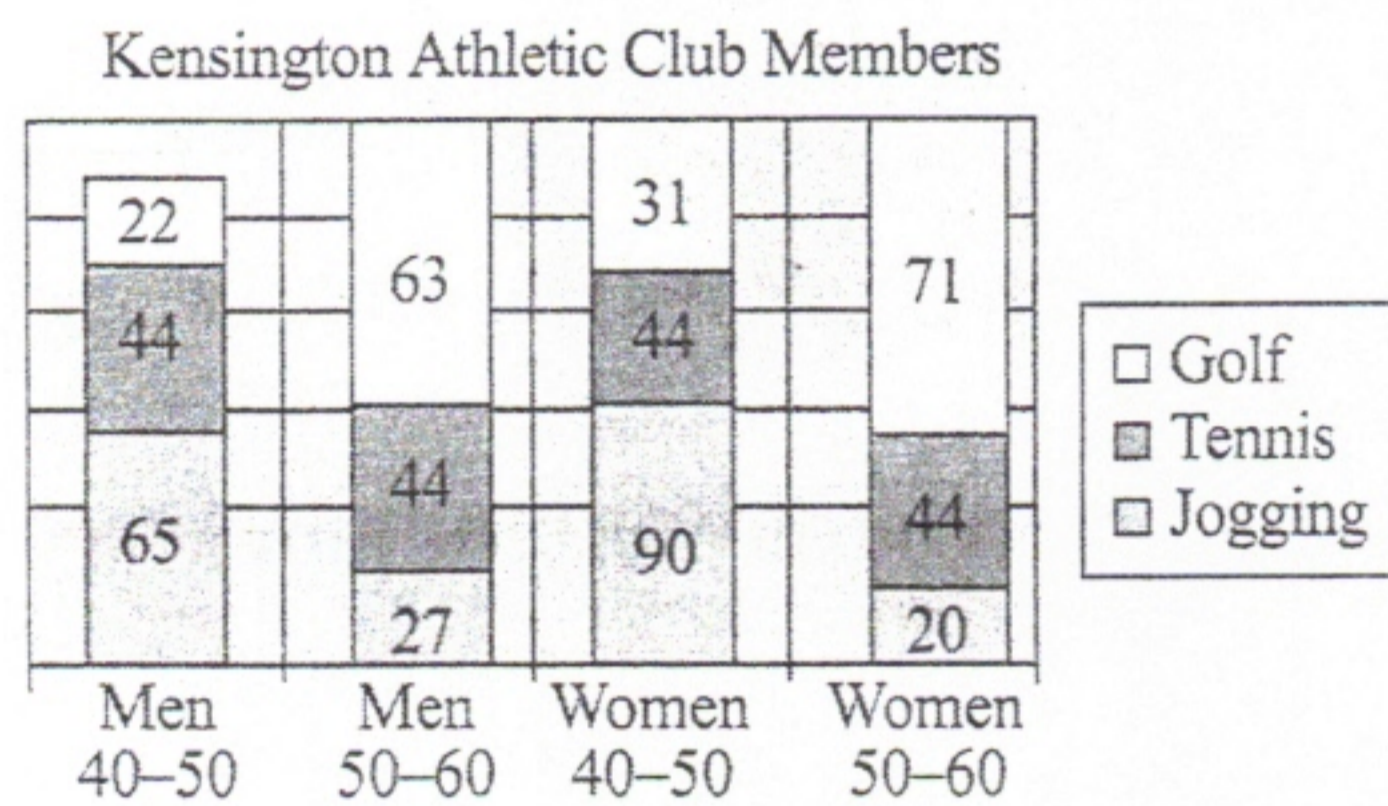


12. The chart above shows the number of yards serviced by Morris and Angelo, each of whom runs a small lawn-care business. Based on the information in the chart, what is the busiest season for lawn care?
- J. Spring
 - K. Summer
 - L. Fall
 - M. Winter

13. Based on the information in the chart, which of the following statements is true?

- A. Morris experienced a bigger decline in business from the summer to the winter than did Angelo.
- B. Angelo experienced a bigger decline in business from the summer to the winter than did Morris.
- C. Angelo and Morris experienced the same decline in business from the summer to the winter.
- D. Neither Morris nor Angelo experienced a decline in business from the summer to the winter.

Use the following chart for Questions 14 and 15:



14. The chart above illustrates the members of the Kensington Athletic Club between the ages of 40 and 60 and the sports in which they currently participate. Based on the information in the chart, which sport becomes the most popular as both men and women grow older?
- J. Golf
 - K. Tennis
 - L. Jogging
 - M. Not enough information available

15. Based on the information in the chart, which sport currently has the most total members participating in it?

A. Golf
B. Tennis
C. Jogging
D. Not enough information available

Directions: For questions 16–20, estimate the answer in your head. No scratch work is allowed. Do *not* try to compute exact answers.

16. At Morning Dew Café, a plain bagel has 250 calories, and a glass of orange juice has 160 calories. A king-sized jelly donut with chocolate icing and sprinkles has about 740 calories, and a large soda has about 255 calories. Roughly how many bagel-juice combos would it take to equal the number of calories in the donut and large soda?

J. $1\frac{1}{2}$
K. 2
L. $2\frac{1}{2}$
M. 3

17. The closest estimate of $385 - (2.9 \times 15.8)$ is _____.
- A. 337
B. 355
C. 360
D. 415

18. George earns \$10 per week. How many weeks will it take him to earn about \$255?

J. 25
K. 52
L. 144
M. Not given

19. The closest estimate of 7.1×7.9 is _____.

A. 49
B. 56
C. 63
D. 70

20. The closest estimate of $221.8 \div 9.989$ is _____.

J. 11
K. 12
L. 20
M. 22

Directions: For questions 21–50, read each problem and find the answer.

21. $(6 \times 2) + (7 \times 3) =$

- A. $(6 \times 7) + (2 \times 3)$
- B. $(7 - 6) + (3 - 2)$
- C. $(7 \times 3) + (6 \times 2)$
- D. $(7 \times 3) \times (6 \times 2)$

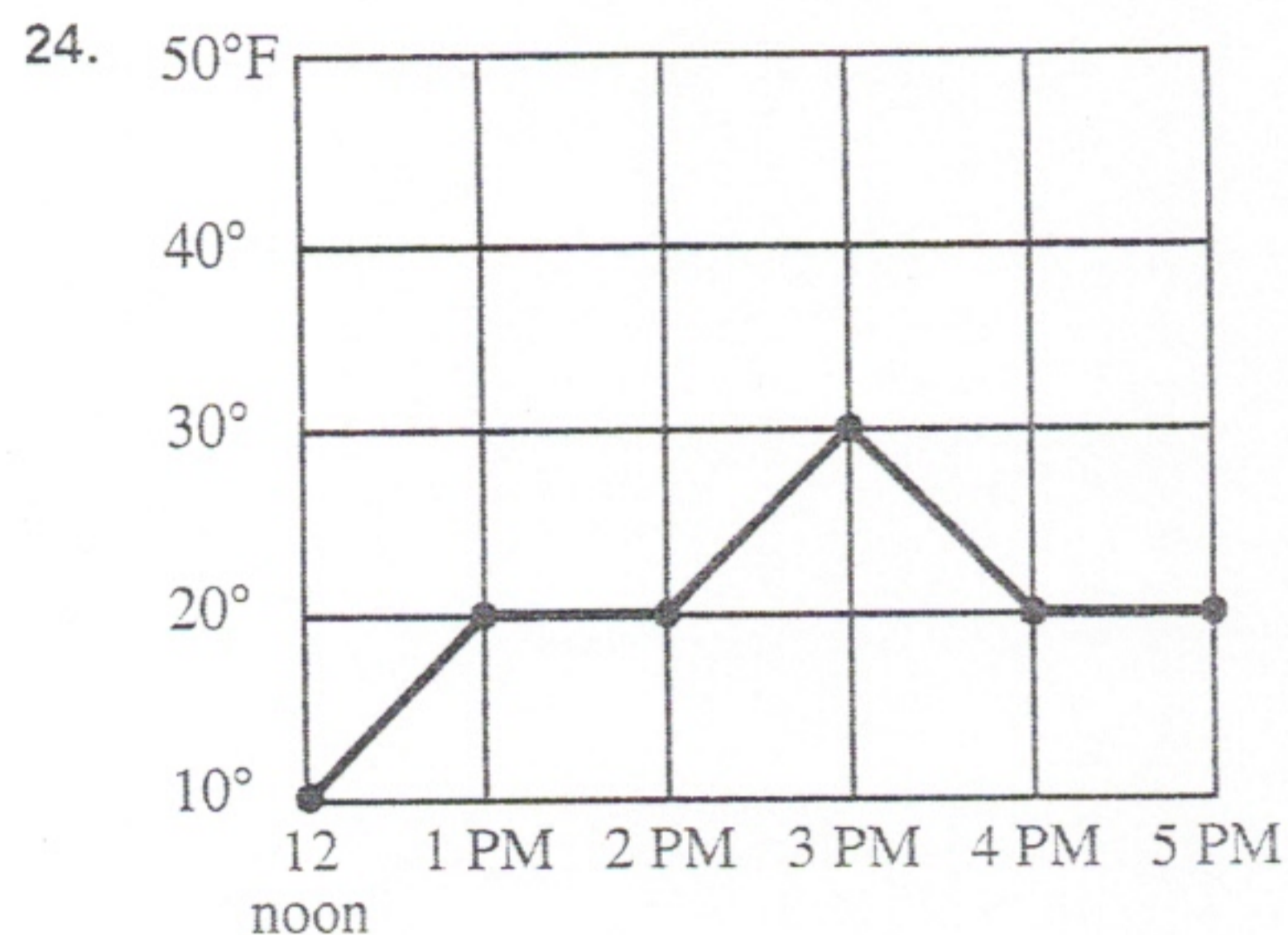
22. Which of the following will substitute for x and make the statement below true?

$$56 - (7 - x) = 53$$

- J. 1
- K. 2
- L. 3
- M. 4

23. An angle that is greater than 90° and less than 180° is a(n)

- A. acute angle.
- B. right angle.
- C. reflex angle.
- D. obtuse angle.



What was the average temperature on the afternoon shown in the above graph?

- J. 20°
- K. 24°
- L. 25°
- M. 30°

25. Mr. Ramos has agreed to borrow \$3,500 for one year at 10% interest. What is the total amount he will pay back to the bank?

- A. \$350
- B. \$3,675
- C. \$3,700
- D. \$3,850

26. Which of the following statements is true?

- J. $4 \times 5 < 4 \times 1 + 6$
- K. $87 + 3 < 30$
- L. $2^5 = 2 \times 5$
- M. $\frac{1}{4} < \frac{1}{5}$

27. If one angle of a triangle measures 115° , then the sum of the other two angles is

- A. 65°
 B. 75°
 C. 195°
 D. 245°

28. At 20 miles per hour, how long does it take to travel 1 mile?

- J. 1 min.
 K. 2 min.
 L. 3 min.
 M. 4 min.

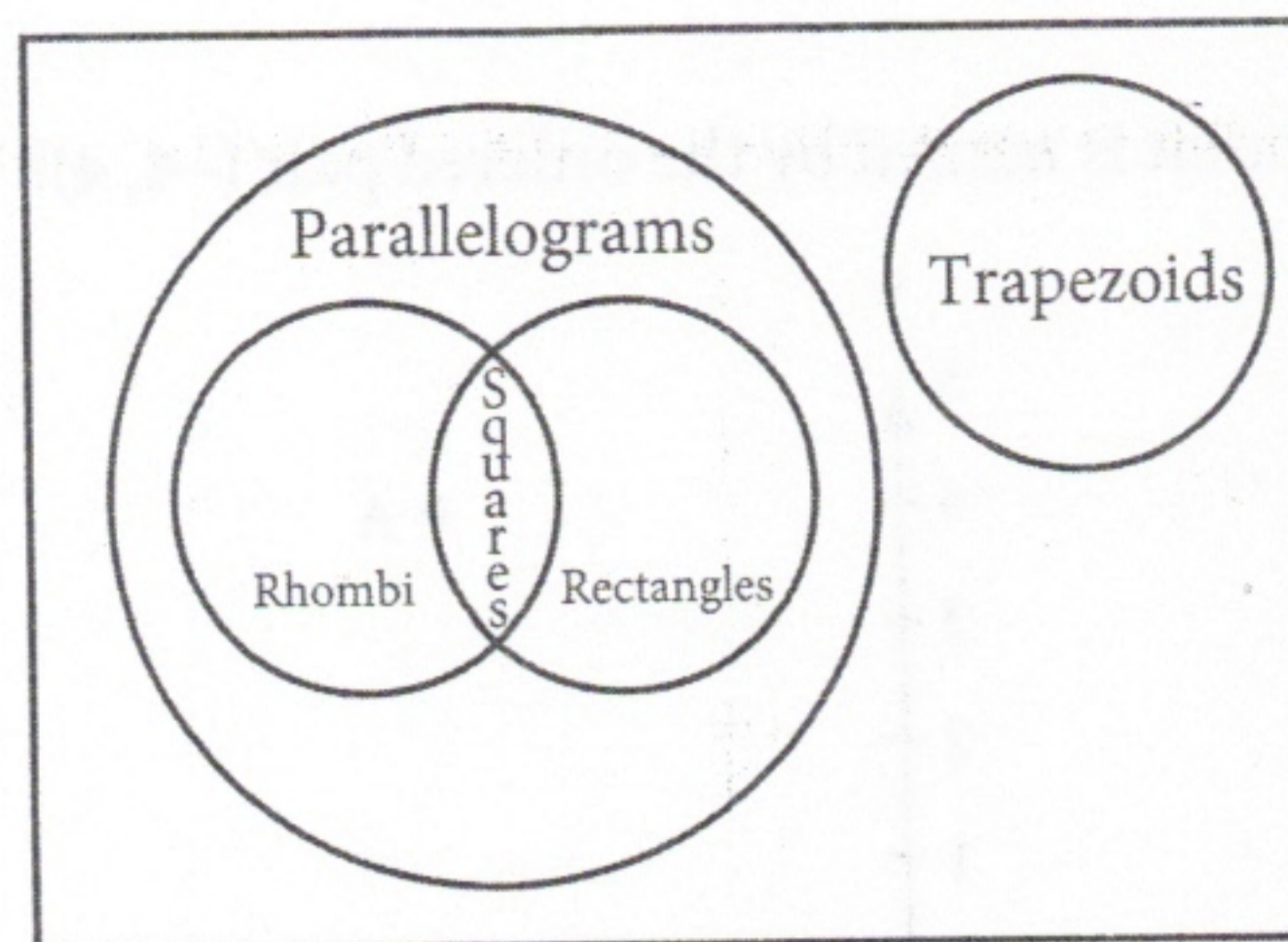
29. Approximate the circumference of a circle whose radius is 21 feet. (Use $\pi = \frac{22}{7}$.)

- A. 65.94 feet
 B. 132 feet
 C. 153 feet
 D. 1,769.4 feet

30. Nikolai made \$8.80 per hour this summer selling hot dogs at the baseball stadium. If union rules require that each stadium employee receive a raise of between 10% and 20% each year, what is the acceptable range for Nikolai's hourly wage next summer?

- J. \$8.80 to \$9.00
 K. \$9.04 to \$9.52
 L. \$9.68 to \$10.56
 M. \$10.57 to \$11.4

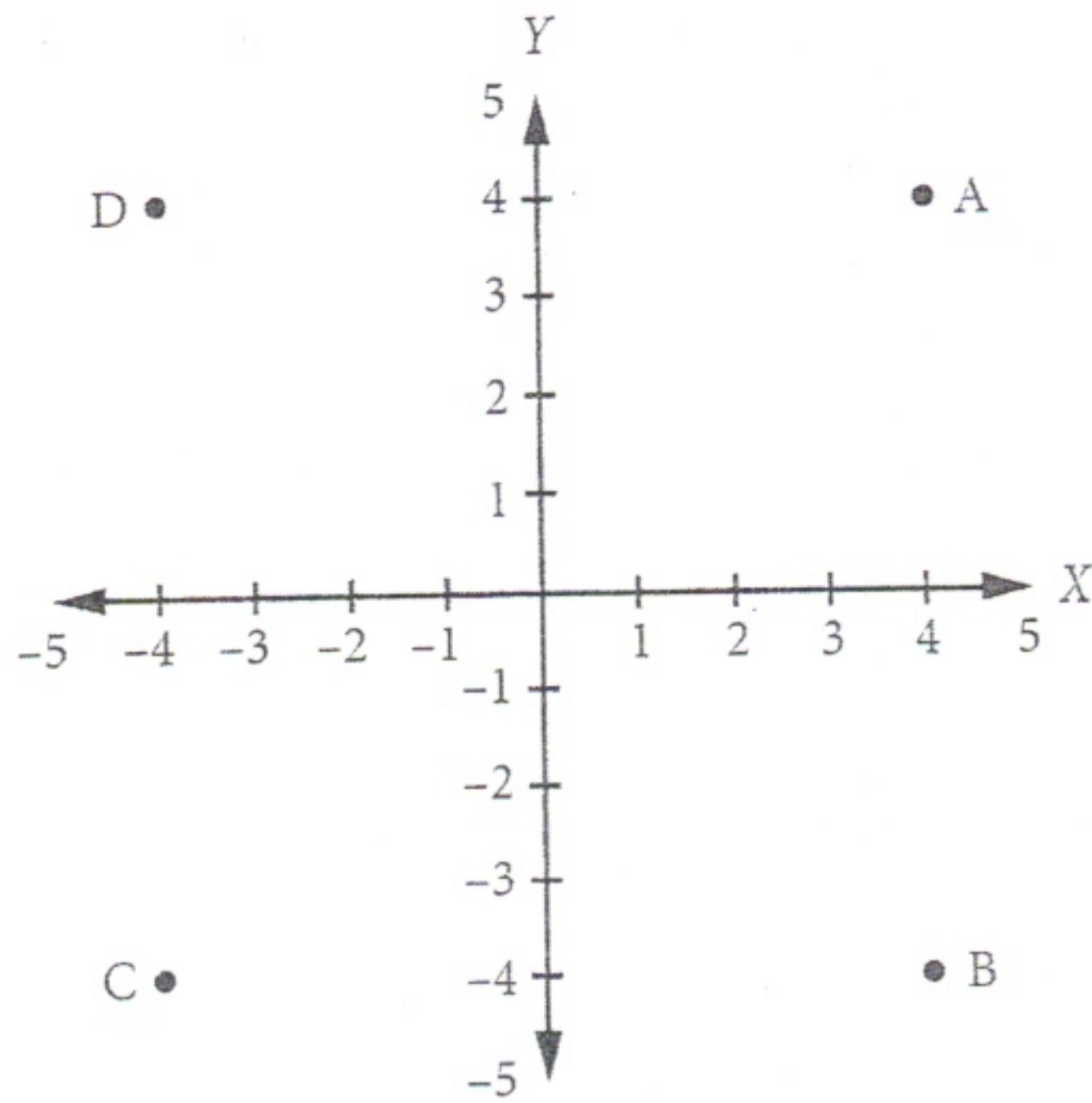
31.



From the diagram above, we know that

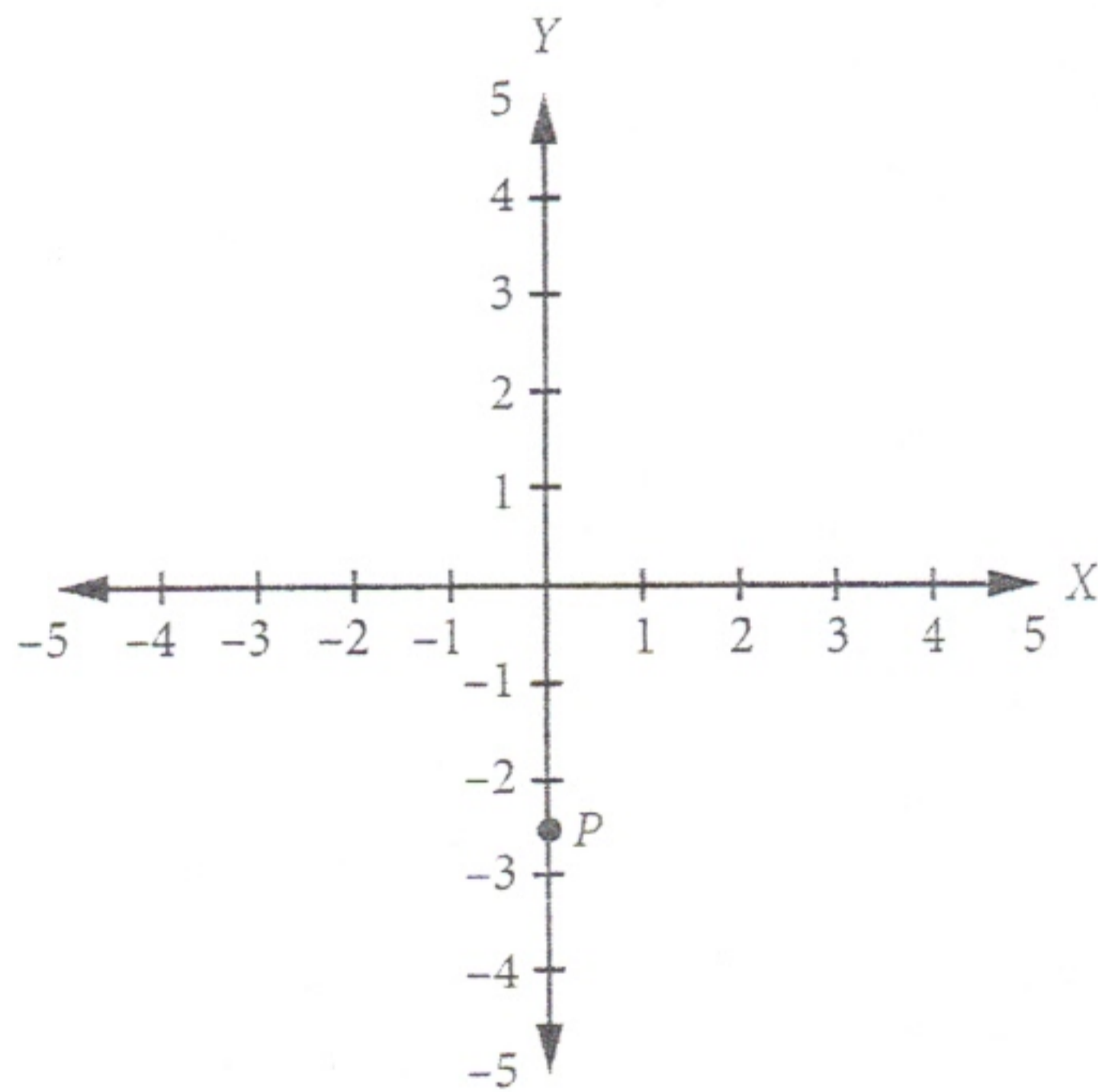
- A. all trapezoids are parallelograms.
 B. some rhombi are parallelograms.
 C. some rectangles are rhombi.
 D. all parallelograms are rectangles.
32. How many 2-inch tiles would have to be put around the outside edge of a 4-foot \times 12-foot rectangle to completely frame the rectangle?
- J. 32
 K. 36
 L. 192
 M. 196
33. A certain highway intersection has had A accidents over a ten-year period, resulting in B deaths. What is the yearly average death rate for the intersection?
- A. $A + B - 10$
 B. $\frac{B}{10}$
 C. $10 - \frac{A}{B}$
 D. $\frac{AB}{12}$

34. Which point is named by the ordered pair $(-4, 4)$?



- J. Point A
- K. Point B
- L. Point C
- M. Point D

35. What are the coordinates of point P on the graph?



- A. $(-2\frac{1}{2}, 0)$
- B. $(0, -3\frac{1}{2})$
- C. $(0, -2\frac{1}{2})$
- D. $(-1, -2\frac{1}{2})$

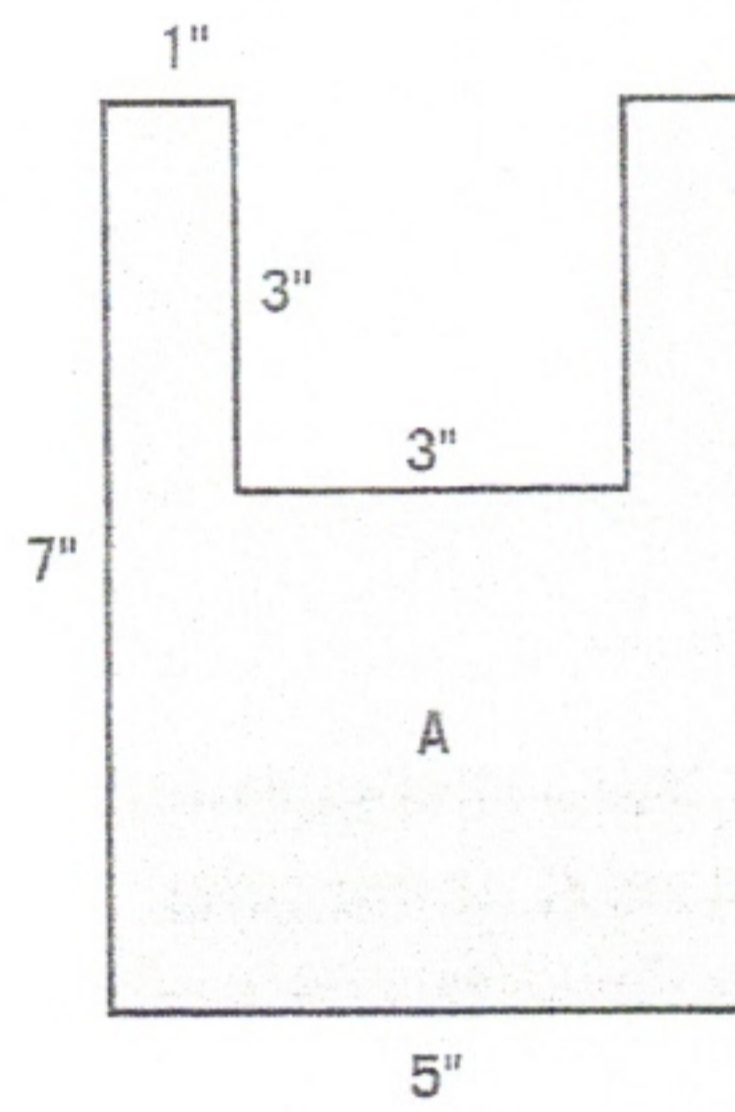
36. On a blueprint, 2 inches represents 24 feet. How long must a line be to represent 72 feet?

- J. 4 inches
- K. 6 inches
- L. 12 inches
- M. 36 inches

37. A store puts a pair of \$14 jeans on sale at a 25% discount. What is the new selling price?

- A. \$3.50
- B. \$10.50
- C. \$13.65
- D. \$13.75

38.



The area of figure A is

- J. 19 sq. in.
- K. 26 sq. in.
- L. 30 sq. in.
- M. 44 sq. in.

39. A boy of M years old has a brother six years older and a sister four years younger. The combined age of the three is

- A. $M + 10$
- B. $3M + 2$
- C. $3M - 2$
- D. $2M - 6$

M
 $M + 6$
 $M - 4$

 $3M + 2$