



New York State Testing Program

Mathematics

Book 1 

May 6–7, 2003



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Part 1

Sample A

The school auditorium was $\frac{7}{8}$ full. What percent of the auditorium was full?

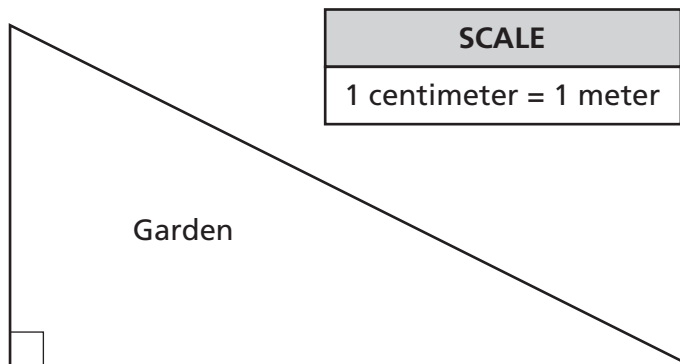
- A 7.8%
- B 37.5%
- C 62.5%
- D 87.5%

Sample B



Use your ruler to help you solve this problem.

A garden is in the shape of a triangle as shown in the figure below. The garden is to be enclosed by a fence.



Based on the scale, how much fencing is needed to enclose the garden?

- F 19.1 meters
- G 20.7 meters
- H 23.5 meters
- J 26.6 meters

STOP

1 Andy bought a carton of milk that cost \$3.10, a package of sugar that cost \$1.39, and a carton of eggs that cost \$2.10. How much change did he receive from \$20.00 ?

- A** \$6.59
- B** \$13.41
- C** \$13.51
- D** \$14.41

2 Which statement is correct?

- F** $(2 \times 3) + 5 \div 8 = 2$
- G** $(2 \times 3 + 5) \div 8 = 2$
- H** $2 \times (3 + 5) \div 8 = 2$
- J** $2 \times 3 + (5 \div 8) = 2$

3 Karen is solving this problem.

$$(3^2 + 4^2)^2 = ?$$

Which step is correct in the process of solving the problem?

- A** $(3^2 + 4^4)$
- B** $(9^2 + 16^2)$
- C** $(7^2)^2$
- D** $(9 + 16)^2$

4 At the Sinclair family reunion, Katy noticed that the number of people attending could be divided into three equal groups. She also noticed the number could be divided equally into groups of four, five, or six. What is the smallest number of people who could have attended the reunion?

- F** 30 people
- G** 60 people
- H** 90 people
- J** 120 people

5 Julie has \$10.00. She plans to buy 4 bagels and then buy pastries with the money she has left.

PRICE LIST

Pastries \$1.75	Bagels \$1.00
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According to the price list above, what is the maximum number of pastries she can buy?

- A** 2
- B** 3
- C** 4
- D** 5

6 Which expression is equivalent to the number 8,006,425?

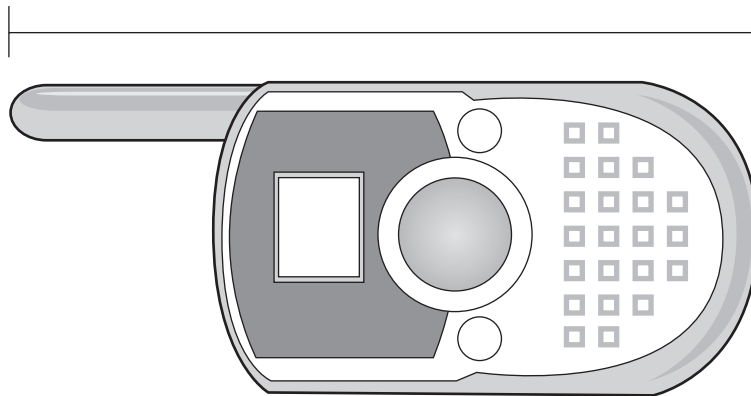
- F** $(8 \times 10^7) + (6 \times 10^6) + (4 \times 10^3) + (2 \times 10^2) + (5 \times 10^1)$
- G** $(8 \times 10) + (6 \times 10) + (4 \times 10) + (2 \times 10) + (5 \times 10)$
- H** $(8 \times 10^6) + (6 \times 10^5) + (4 \times 10^4) + (2 \times 10^3) + (5 \times 10^2)$
- J** $(8 \times 10^6) + (6 \times 10^3) + (4 \times 10^2) + (2 \times 10^1) + (5 \times 10^0)$

7



Use your ruler to help you solve this problem.

Which measurement is closest to the total length of the two-way radio shown below?



- A** 5 centimeters
- B** 5 inches
- C** 10 centimeters
- D** 10 inches

Go On

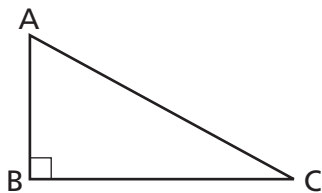
8 Tikka made bamboo fishing poles for her sister and herself. She used $\frac{3}{5}$ of a 10-foot stick of bamboo for her pole and the rest for her sister's. How long is her sister's fishing pole?

- F** 8 feet
- G** 6 feet
- H** 4 feet
- J** 2 feet

9 There are 300 students in the eighth grade. The ratio of girls to boys is 3 to 2. What percent of the students are boys?

- A** $33\frac{1}{3}\%$
- B** 40%
- C** $66\frac{2}{3}\%$
- D** 150%

10 What is the relationship between angles A and C in the right triangle below?



- F** They are complementary angles.
- G** They are supplementary angles.
- H** They are congruent angles.
- J** They are vertical angles.

11 Agatha, Theresa, and Bruce collected cans for a food drive. The sum of the number of cans collected by Agatha and Theresa is less than 50. The sum of the number of cans collected by Bruce and Theresa is more than 50. Which statement is supported by the given information?

- A** Bruce collected more cans than Agatha.
- B** Theresa collected more cans than Agatha.
- C** Bruce collected fewer cans than Theresa.
- D** Theresa collected the same number of cans as Bruce.

12 What is the next number in this sequence?

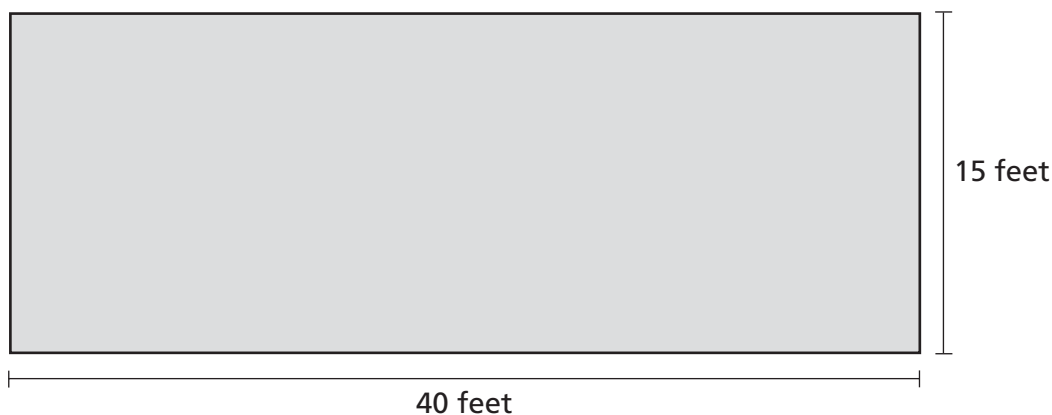
15	60	240	960	__?
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- F** 1,240
- G** 1,275
- H** 1,920
- J** 3,840

13 A car traveled 187 miles in 3 hours and 24 minutes. What was the average speed of the car in miles per hour?

- A** 50
- B** 55
- C** 58
- D** 62

- 14** Joseph needs to calculate how much grass seed he needs to cover his lawn. A diagram of his lawn is shown below.



One pound of seed covers an area of 100 square feet and the seed is sold in five-pound bags. How many bags will he need?

- F** 1
- G** 2
- H** 3
- J** 5

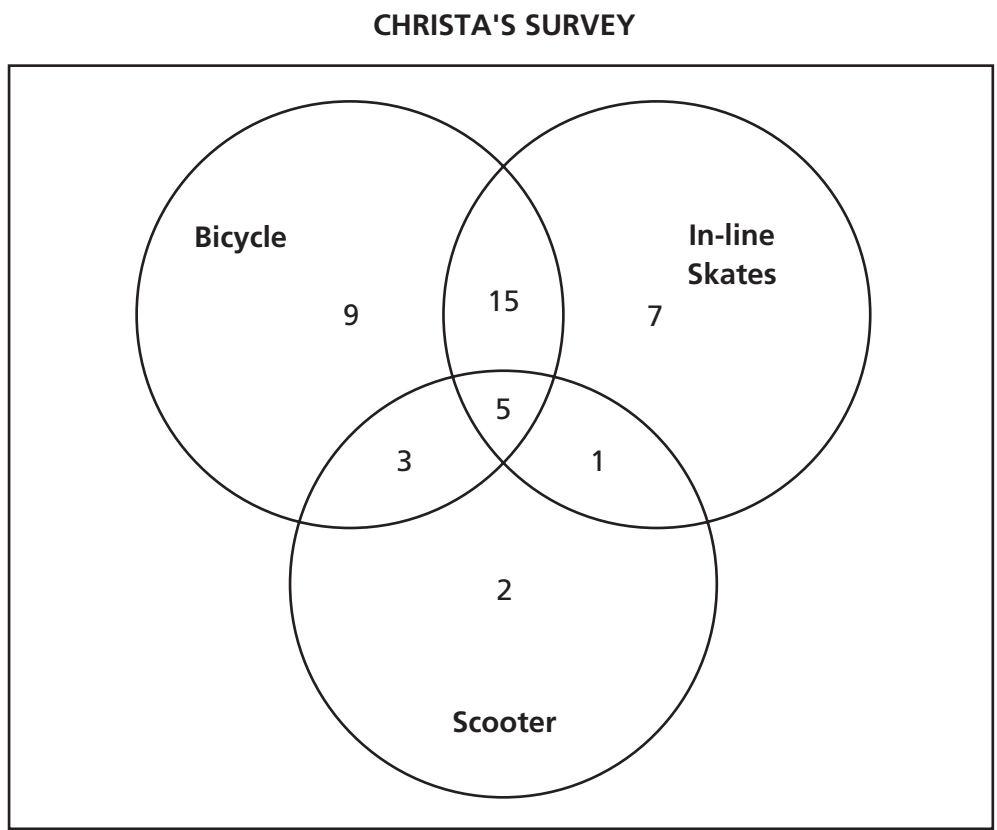
- 15** Gwen has three jars of marbles that contain x marbles and two jars that contain y marbles. Which expression represents the total number of marbles Gwen has?

- A** $3x + 2y$
- B** $2x + 3y$
- C** $(2 + 3)(x + y)$
- D** $3(x + y) + 2(x + y)$

- 16** Which jacket has the lowest sale price?

- F** 5% off a jacket originally priced at \$26.00
- G** 10% off a jacket originally priced at \$26.00
- H** 15% off a jacket originally priced at \$30.00
- J** 20% off a jacket originally priced at \$30.00

Christa surveyed her classmates to see how many of them owned bicycles, in-line skates, and scooters. She made this Venn diagram to display the results.



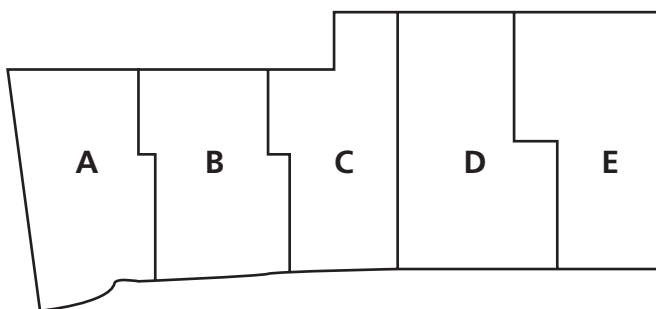
What is the ratio of classmates who own all three (a bicycle, scooter, and in-line skates) to the number of students surveyed?

- A $\frac{5}{24}$
- B $\frac{5}{37}$
- C $\frac{5}{42}$
- D $\frac{5}{47}$

- 18** A dinner plate has a diameter of 7 inches. Approximately how many inches is the circumference of the plate?
- F** 14 inches
 - G** 22 inches
 - H** 44 inches
 - J** 154 inches

- 19** In a group of 40 people, 32 are over 5 feet 7 inches in height, and the others are under 5 feet 7 inches. If one person is selected at random from this group, what is the probability the person's height will be under 5 feet 7 inches?
- A** 0.80
 - B** 0.56
 - C** 0.44
 - D** 0.20

- 20** Johan is counting all the pumpkins in his family's field just before the harvest. A diagram of the entire field divided into sections is shown below.



- He counted 358 pumpkins in section A. Assuming the pumpkins are evenly distributed across the entire field, what is the best estimate for the total number of pumpkins in the entire field?
- F** 500–1,000
 - G** 1,000–1,500
 - H** 1,500–2,000
 - J** 2,000–2,500

Go On

- 21** The table below shows the relationship between the hours Joe works and the money he earns.

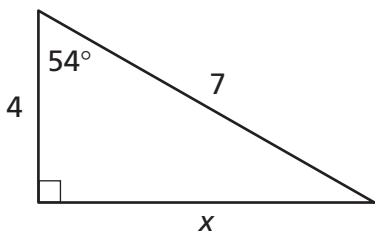
JOE'S EARNINGS

Hours Worked	Money Earned
2	\$12.50
4	\$25.00
6	\$37.50
8	
10	

How much money does Joe earn if he works 10 hours?

- A** \$50.00
- B** \$62.50
- C** \$75.00
- D** \$100.00

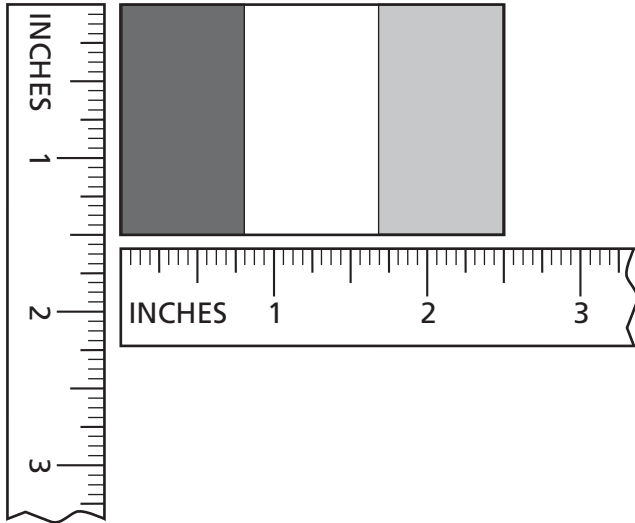
- 22** Which equation can be used to find the length of side x in the right triangle below?



- F** $\cos 54^\circ = \frac{7}{x}$
- G** $\sin 54^\circ = \frac{x}{7}$
- H** $\cos 54^\circ = \frac{4}{x}$
- J** $\sin 54^\circ = \frac{x}{4}$

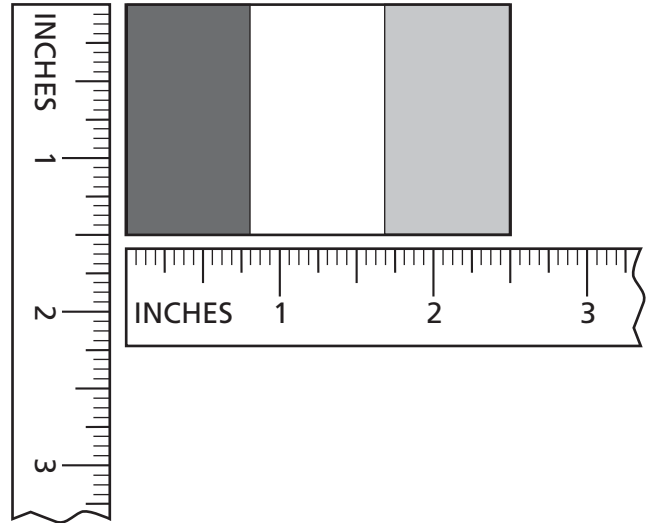
In social studies class, Cole is making a scale drawing of a flag. The flag measures 24 inches high by 36 inches wide, having three vertical stripes each 12 inches wide. Which drawing shows a correct model of this flag?

SCALE 1/4 inch = 1 foot



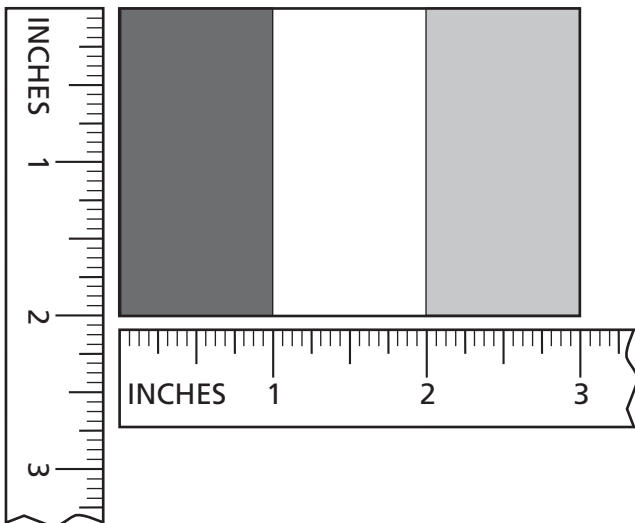
A

SCALE 1/2 inch = 1 foot



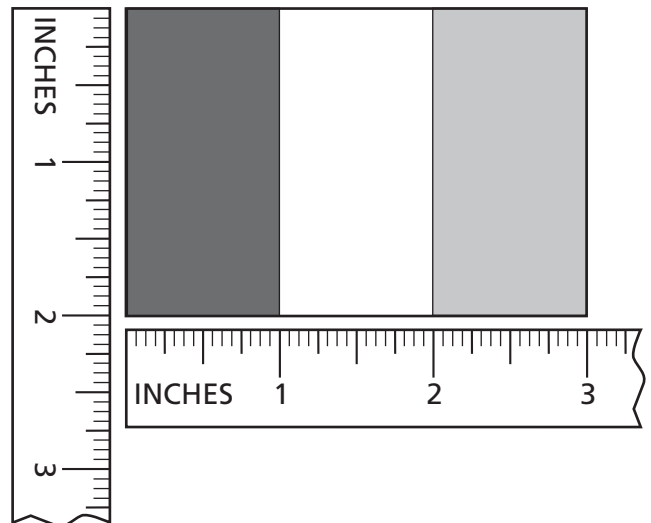
C

SCALE 1/2 inch = 1 foot



B

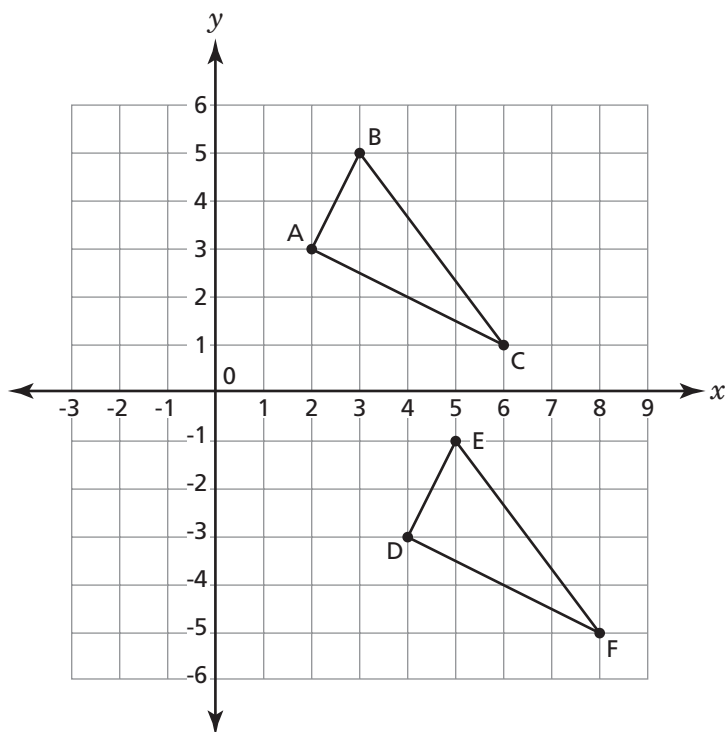
SCALE 1 inch = 1 foot



D

Go On

Triangle DEF is a translation of triangle ABC.



Which statement describes the translation of triangle ABC to triangle DEF?

- F** 2 units to the right, 6 units down
- G** 2 units to the right, 6 units up
- H** 6 units to the right, 2 units down
- J** 6 units to the right, 2 units up

In the first race of the season, Carol swam her event in 5 minutes and 15 seconds. Her goal was to be able to swim the same distance in $\frac{2}{3}$ the time by the end of the season. If she reaches her goal, how long will it take for her to swim the race at the end of the season?

- A** 1 minute and 45 seconds
- B** 2 minutes and 30 seconds
- C** 3 minutes and 30 seconds
- D** 3 minutes and 40 seconds

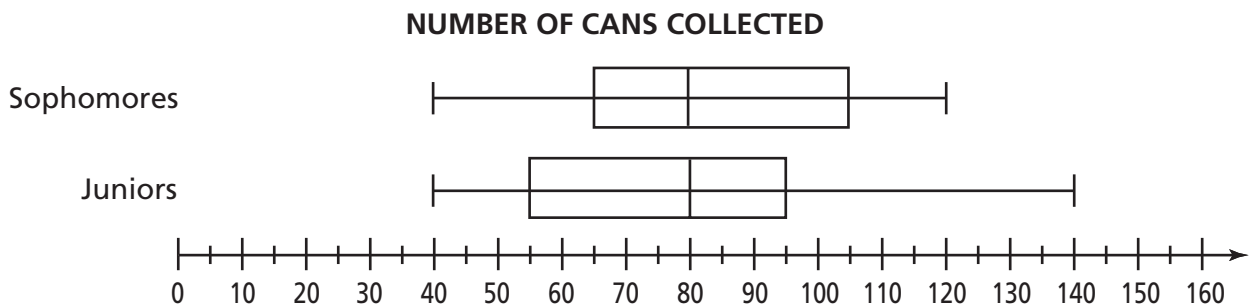
26

The length of a rectangle is five inches longer than the width. If the area of the rectangle is 14 square inches, which equation can be used to find the width of the rectangle?

- F** $2x + 2(x + 5) = 14$
- G** $x + x + 5 = 14$
- H** $x(x + 5) = 14$
- J** $x + 5 = 14$

27

The two box-and-whisker plots below show the number of cans the members of the sophomore and junior classes collected for a fundraiser.



What statement about the data in the two plots must be true?

- A** The sophomores and juniors collected the same number of cans.
- B** The median number collected was the same for both classes.
- C** The mean number collected was the same for both classes.
- D** The upper extreme value was the same for both classes.

STOP



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