

MATHEMATICS TEST

60 Minutes – 60 Questions

DIRECTIONS: Solve each problem, choose the correct answer, and then darken the corresponding oval on your answer sheet.

Do not linger over problems that take too much time. Solve as many as you can; then return to the others in the time you have left for this test.

You are permitted to use a calculator on this test. You may use your calculator for any problems you choose, but some of the problems may best be done without using a calculator.

NOTE: Unless otherwise stated, all of the following should be assumed:

1. Illustrative figures are NOT necessarily drawn to scale.
2. Geometric figures lie in a plane.
3. The word *line* indicates a straight line.
4. The word *average* indicates arithmetic mean.

1. A shoe store charges \$39 for a certain type of sneaker. This price is 30% more than the amount it costs the shoe store to buy one pair of these sneakers. At an end-of-the-year sale, sales associates can purchase any remaining sneakers at 20% off the shoe store's cost. How much would it cost an employee to purchase a pair of sneakers of this type during the sale (excluding sales tax)?

F. \$31.20

G. \$25.00

H. \$24.00

J. \$21.84

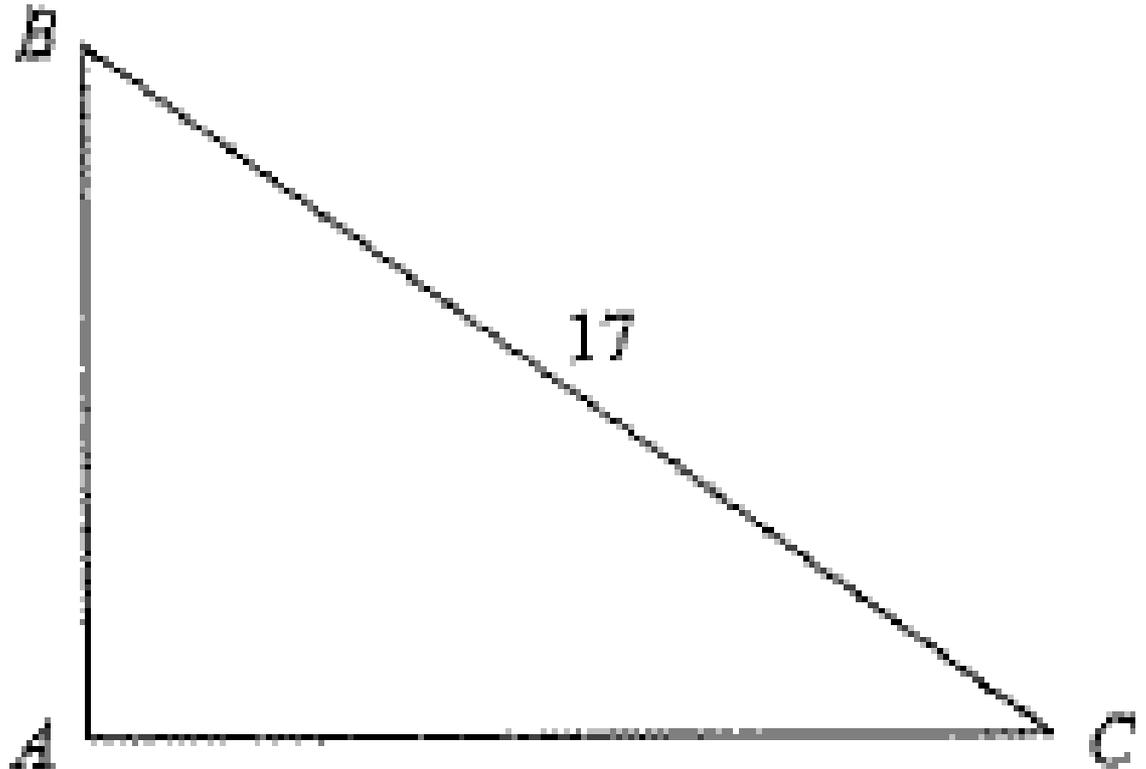
K. \$19.50

- 2. After excavating a lot, workers removed an estimated 7,000 cubic yards of dirt from the area. If this dirt were spread in an even layer over an empty lot with dimensions 30 yards by 64 yards, about how deep, in yards, would the layer of dirt be?**
- A. Less than 1**
 - B. Between 1 and 2**
 - C. Between 2 and 3**
 - D. Between 3 and 4**
 - E. More than 4**

3. The hypotenuse of the right triangle $\triangle ABC$ shown below is 17 feet long. The cosine of angle C is $\frac{3}{5}$.

How many feet long is the segment AC?

- F. 6
- G. 10.2
- H. 12
- J. 15
- K. 28.3



Answers

1. H
2. D
3. G