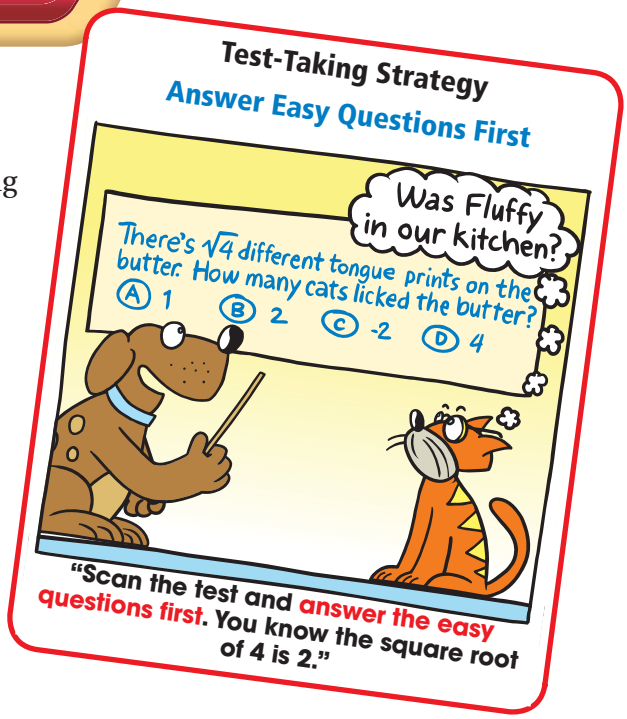
English Spanish

6 Standardized Test Practice



1. The period T of a pendulum is the time, in seconds, it takes the pendulum to swing back and forth. The period can be found using the formula $T = 1.1\sqrt{L}$, where L is the length, in feet, of the pendulum. A pendulum has a length of 4 feet. Find its period.

A. 5.1 sec

B. 4.4 sec

C. 3.1 sec

D. 2.2 sec

2. The steps Pat took to write the equation in slope-intercept form are shown below. What should Pat change in order to correctly rewrite the equation in slope-intercept form?

$$3x - 6y = 1$$
$$3x = 6y + 1$$
$$x = 2y + \frac{1}{3}$$

F. Use the formula $m = \frac{\text{rise}}{\text{run}}$.

G. Use the formula $m = \frac{\text{run}}{\text{rise}}$.

H. Subtract $3x$ from both sides of the equation and divide every term by -6.

I. Subtract 1 from both sides of the equation and divide every term by 3.

3. A housing community started with 60 homes. In each of the following years, 8 more homes were built. Let y represent the number of years that have passed since the first year and let n represent the number of homes. Which equation describes the relationship between n and y?

A. $n = 8y + 60$

B. $n = 68y$

C. $n = 60y + 8$

D. $n = 60 + 8 + y$

4. The domain of a function is 0, 1, 2, 3, 4, 5. What can you conclude?

F. The domain is continuous.

G. The domain is discrete.

H. The function is linear.

I. The range is 0, 1, 2, 3, 4, 5.

5. A football field is 40 yards wide and 120 yards long. Find the distance between opposite corners of the football field. Show your work and explain your reasoning.

Think Solve Explain

6. A computer consultant charges \$50 plus \$40 for each hour she works. The consultant charged \$650 for one job. This can be represented by the equation below, where h represents the number of hours worked.

$$40h + 50 = 650$$

How many hours did the consultant work?

7. The formula below can be used to find the number S of degrees in a polygon with n sides. Solve the formula for n.

$$S = 180(n - 2)$$

A. $n = 180(S - 2)$

B. $n = \frac{S}{180} + 2$

C. $n = \frac{S}{180} - 2$

D. $n = \frac{S}{180} + \frac{1}{90}$

8. The table below shows a linear pattern. Which linear function relates y to x?

x	1	2	3	4	5
y	4	2	0	−2	−4

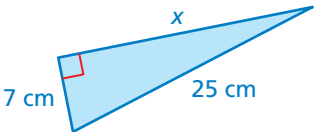
F. $y = 2x + 2$

G. $y = 4x$

H. $y = -2x + 2$

I. $y = -2x + 6$

9. What is the value of x in the right triangle shown?



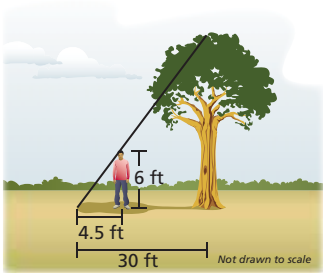
A. 16 cm

B. 18 cm

C. 24 cm

D. $\sqrt{674}$ cm

10. Find the height of the tree in the diagram.



F. 22.5 ft

G. 31.5 ft

H. 35 ft

I. 40 ft

11. Which expression is equivalent to $12\sqrt{24}$?

A. $48\sqrt{6}$

B. $24\sqrt{12}$

C. $24\sqrt{6}$

D. 6

12. The measure of an angle is x degrees. What is the measure of its complement?

F. $(90 - x)°$

G. $(180 - x)°$

H. $(x - 90)°$

I. $(x - 180)°$

13. You fill up the gas tank of your car and begin driving on the interstate. You drive at an average speed of 60 miles per hour. The amount g, in gallons, of gas left in your car can be estimated. Use the formula shown below, where h is the number of hours you have been driving.

$$g = 18 - 2.5h$$

You will fill up when you have 3 gallons of gas left in the gas tank. How long after you start driving will you fill up again?

A. about 36 min

B. about 6.0 h

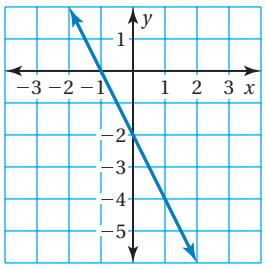
C. about 7.2 h

D. about 8.4 h

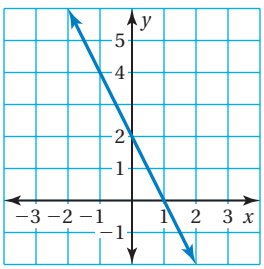
14. An airplane flies 56 miles due north and then 33 miles due east. How many miles is the plane from its starting point?

15. Which graph represents the linear equation $y = -2x - 2$?

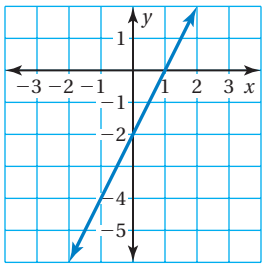
F.



H.



G.



I.