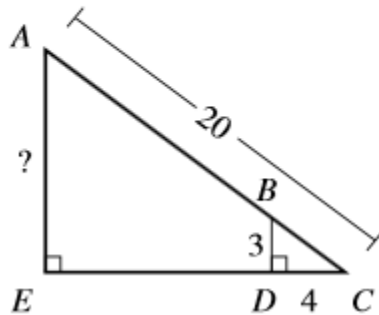


**Titan Learning Center
Mathematics ACT Prep
Set B-Week 6**

Solve each problem, circling the correct answers. Remember that figures are not necessarily drawn to scale.

1. Lines p and n lie in the standard (x,y) coordinate plane. An equation for line p is $y = 0.12x + 3,000$. The slope of line n is 0.1 greater than the slope of line p . What is the slope of line n ?
- F. 0.012
 - G. 0.02
 - H. 0.22
 - J. 1.2
 - K. 300

2. In right triangle $\triangle ACE$ below, \overline{BD} is parallel to \overline{AE} , and \overline{BD} is perpendicular to \overline{EC} at D . The length of \overline{AC} is 20 feet, the length of \overline{BD} is 3 feet, and the length of \overline{CD} is 4 feet. What is the length, in feet, of \overline{AE} ?



- A. 10
 - B. 12
 - C. 15
 - D. 16
 - E. 17
3. The expression $-8x^3(7x^6 - 3x^5)$ is equivalent to:
- A. $-56x^9 + 24x^8$
 - B. $-56x^9 - 24x^8$
 - C. $-56x^{18} + 24x^{15}$
 - D. $-56x^{18} - 24x^{15}$
 - E. $-32x^4$

4. As part of a lesson on motion, students observed a cart rolling at a constant rate along a straight line. As shown in the chart below, they recorded the distance, y feet, of the cart from a reference point at 1-second intervals from $t = 0$ seconds to $t = 5$ seconds.

t	0	1	2	3	4	5
y	14	19	24	29	34	39

Which of the following equations represents this data?

- F. $y = t + 14$
G. $y = 5t + 9$
H. $y = 5t + 14$
J. $y = 14t + 5$
K. $y = 19t$
5. In a basketball passing drill, 5 basketball players stand evenly spaced around a circle. The player with the ball (the passer) passes it to another player (the receiver). The receiver cannot be the player to the passer's immediate right or left and cannot be the player who last passed the ball. A designated player begins the drill as the first passer. This player will be the receiver for the first time on which pass of the ball?
- A. 4th
B. 5th
C. 6th
D. 10th
E. 24th

TLC Stamp

