Slope and Distance

Pre-Assessment

Circle the letter of the best answer.

1. What is the distance between the points (7, 4) and (–3, 5)?

   a. $\sqrt{117}$ units

   b. $\sqrt{101}$ units

   c. 10 units

   d. $\sqrt{65}$ units

2. The line through the points (–3, –1) and (0, 5) is parallel to the line through which of the following points?

   a. (1, –3) and (2, –1)

   b. (1, –3) and (3, 3)

   c. (1, –3) and (3, –2)

   d. (1, –3) and (3, –3)

3. Which equation is parallel to the line $y=-\frac{1}{2}x+2$ and passes through the point (10, 4)?

   a. $y = 2x + 16$

   b. $y=\frac{1}{2}x-6$

   c. $y=-\frac{1}{2}x+12$

   d. $y=-\frac{1}{2}x+9$

4. Which equation is perpendicular to the line $y=\frac{1}{3}x-9$ and passes through the point (–6, 2)?

   a. $y=\frac{1}{3}x+4$

   b. $y = –3x – 16$

   c. $y=-\frac{1}{3}x+4$

   d. $y = –3x$

5. Lee's house is located at the point (1, 0). The equation of the road is $y = 2x + 1$. Lee is building a driveway from his house to the road. What is the approximate length of the shortest driveway he can build? (Each unit represents 100 yards.)

   a. 123 yards

   b. 144 yards

   c. 134 yards

   d. 190 yards