

3-8

Standardized Test Prep

Slopes of Parallel and Perpendicular Lines

Multiple Choice

For Exercises 1-4 choose the correct letter.

1. Which pair of slopes could represent perpendicular lines?

(A) $\frac{1}{7}, 7$

(B) $\frac{1}{2}, \frac{2}{4}$

(C) $-\frac{3}{4}, \frac{4}{3}$

(D) $\frac{1}{3}, \frac{1}{3}$

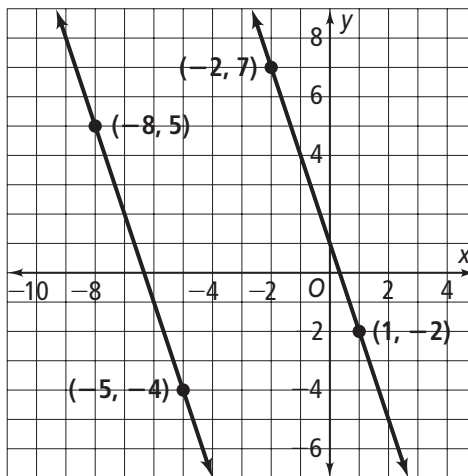
2. The lines shown in the figure at the right are

(F) parallel.

(G) perpendicular.

(H) neither parallel nor perpendicular.

(I) both parallel and perpendicular.



3. Two lines are perpendicular when

(A) the product of their slopes is -1 .

(B) the product of their slopes is greater than 0.

(C) they have the same slope.

(D) their slopes are undefined.

4. Which is the equation for the line perpendicular to $y = -\frac{5}{3}x + 11\frac{1}{3}$ and containing $P(-2, 3)$?

(F) $y - 2 = -\frac{3}{5}(x - 3)$

(G) $y = -\frac{5}{3}x + 4\frac{1}{3}$

(H) $y = -\frac{3}{5}x + 4\frac{1}{5}$

(I) $y = \frac{3}{5}x + 4\frac{1}{5}$

Extended Response

5. Graph the vertices of $ABCD$ where $A(-1, 3)$, $B(-6, -2)$, $C(-1, -7)$, and $D(4, -2)$.

a. Explain how you know the opposite sides of $ABCD$ are parallel.

b. Explain how you know the adjacent sides of $ABCD$ are perpendicular.

c. What is the length of each side, to the nearest inch, if each grid space is equal to 2 in.?

d. What kind of figure is $ABCD$?

