Equations of Perpendicular Lines Quiz

1. What is the slope of a line perpendicular to this equation: $y = 2x + 1$?

a) 2

b) -2

c) $-\frac{1}{2}$

d) $\frac{1}{2}$

2. Determine the slope of the line perpendicular to line $3x - y = 9$.

a) $\frac{1}{3}$

b) $-\frac{1}{3}$

c) 3

d) -3

3. Find the equation of the line perpendicular to the line $y = -\frac{1}{2}x + 3$ passing through $(6, 8)$.

a) $y = -\frac{1}{2}x - 3$

b) $y = 2x + 4$

c) $y = 2x - 4$

d) $y = -\frac{1}{2}x + 11$

4. The equations $3x - 2y = 5$ and $6x + 4y = 3$ are perpendicular.

a) *True*

b) *False*

5. Find the equation of the line perpendicular to the line passing through two points $(1,3)$ and $(5,2)$.

a) $y = \frac{1}{4}x + 2$

b) $y = 4x + 6$

c) $y = -4x + 2$

d) $y = -\frac{1}{4}x - 8$

6. The equations $y = 4x + 1$ and $x + 4y = 16$ are perpendicular.

a) *True*

b) *False*

7. Determine the slope of the line perpendicular to $y + 2 = \frac{1}{5}(x - 6)$.

a) 2

b) -6

c) $\frac{1}{5}$

d) -5

8. Which of the following equation is perpendicular to the line $8x + 2y = 4$

a) $2x - 8y = -16$

b) $4x + 6y = 2$

c) $2x - 4y = -12$

d) $3x + 9y = 3$

9. Determine the slope of the line perpendicular to $x = -2$.

a) 1

b) -1

c) 0

d) *undefined*

10. Which of the following equations is perpendicular to line $y = \frac{1}{3}x - 5$?

a) $y = -6x + 2$

b) $6x - 2y = -4$

c) $6x + 2y = 4$

d) $3x + 2y = -8$