Families of Lines Quiz

1. Find the equation of the line passing through $(5,-2)$ perpendicular to $y=\frac{1}{2}x+3$

a) $y=\frac{1}{2}x-3.5$

b) $y=-\frac{1}{2}x+0.5$

c) $y=-2x+8$

d) $y=2x-10$

2. Find the equation of the line parallel to $y=4$ that passes through point $(2,-1)$

a) $y=-1$

b) $y=2$

c) $x=-1$

d) $x=-2$

3. Find the equation of the line perpendicular to the line $y=4x+2$ that passes through the point $(8,\ 6)$.

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

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

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

d) $y=-\frac{1}{4}x+6$

4. The equations $2x-y=4$ and $4x+8y=16$ are perpendicular.

a) *True*

b) *False*

5. Find the equation of the line parallel 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 equation $y = 4x + 1$ can be rewritten as $y - 9 = 4(x - 2)$.

a) *True*

b) *False*

7. Which of the of following equations will passes through point (3, 4)?

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

b) $3x + 4y = 8$

c) $y = 2x - 4$

d) $y - 4 = 2(x - 3)$

8. Which of the following equation is parallel to the line $8x + 2y = 4$ that passes through $(-3, -4)$

a) $y = -4x + 4$

b) $3x + 4y = 20$

c) $4x + y = -16$

d) $y - 6 = -4(x + 2)$

9. Find the equation that is perpendicular to $y + 3 = -\frac{1}{3}(x - 6)$ that passes through $(2, -5)$.

a) $y + 5 = 3(x - 2)$

b) $y = 3x - 9$

c) $6x + 2y = 8$

d) *none of the above*

10. Given the point $(p, 3p)$ that lies on the line $x + 2y = 7$. Find the value of p.

a) 1

b) 2

c) 3

d) 4