Name: _____ Per: ____

Find the slope of the line passing through the given points.

1. $(4, 5), (2, 9)$

$\frac{9-5}{2-4} = \frac{4}{-2} = -2$

2. $(1, 4), (5, 0)$

$\frac{4-0}{1-5} = \frac{4}{-4} = -1$

3. $(-3, 5), (6, 2)$

$\frac{5-2}{6-(-3)} = \frac{3}{9} = \frac{1}{3}$

4. $(2, -7), (4, -4)$

$\frac{-4-(-7)}{4-2} = \frac{3}{2}$

5. $(0, -8), (-3, -5)$

$\frac{-5-(-8)}{-3-0} = \frac{3}{-3} = -1$

6. $\left(\frac{1}{2}, \frac{3}{4}\right), \left(\frac{3}{2}, \frac{9}{4}\right)$

$\frac{\frac{9}{4}-\frac{3}{4}}{\frac{3}{2}-\frac{1}{2}} = \frac{\frac{6}{4}}{\frac{2}{2}} = \frac{3}{2}$

Write an equation of the line that passes through the given point and has the given slope.

7. $(2, 1), m = -2$

$y-1 = -2(x-2)$

8. $(-4, 3), m = 5$

$y-3 = 5(x-(-4))$

9. $(7, -5), m = 1$

$y-(-5) = 1(x-7)$

10. $(-1, -10), m = 3$

$y-(-10) = 3(x-(-1))$

11. $\left(\frac{1}{2}, 4\right), m = -8$

$y-4 = -8\left(x-\frac{1}{2}\right)$

12. $\left(\frac{2}{3}, 0\right), m = -4$

$y-0 = -4\left(x-\frac{2}{3}\right)$

Write an equation of the line that passes through the given points.

13. $(-2, 1), (2, 4)$

$\frac{4-1}{2-(-2)} = \frac{3}{4}$

$y-1 = \frac{3}{4}(x-(-2))$

$y-4 = \frac{3}{4}(x-2)$

14. $(-1, 3), (1, -1)$

$\frac{3-(-1)}{-1-1} = \frac{4}{-2} = -2$

$y-3 = -2(x-(-1))$

$y-(-1) = -2(x-1)$

15. $(-3, -1), (3, 2)$

$\frac{2-(-1)}{3-(-3)} = \frac{3}{6} = \frac{1}{2}$

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

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

16. $(4, -2), (6, -3)$

$\frac{-2-(-3)}{4-6} = \frac{1}{-2}$

$y-(-2) = -\frac{1}{2}(x-4)$

$y-(-3) = -\frac{1}{2}(x-6)$

17. $(1, 5), (-4, 0)$

$\frac{5-0}{1-(-4)} = \frac{5}{5} = 1$

$y-0 = 1(x-(-4))$

$y-5 = 1(x-1)$

18. $(3, -7), (-2, 3)$

$\frac{3-(-7)}{-2-3} = \frac{10}{-5} = -2$

$y-(-7) = -2(x-3)$

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

19. $(-6, 1), (-5, 4)$

$\frac{4-1}{-5-(-6)} = 3$

$y-1 = 3(x-(-6))$

$y-4 = 3(x-(-5))$

20. $(-3, -2), (4, 1)$

$\frac{1-(-2)}{4-(-3)} = \frac{3}{7}$

$y-(-2) = \frac{3}{7}(x-(-3))$

$y-1 = \frac{3}{7}(x-4)$

21. $(10, -4), (6, -10)$

$\frac{-4-(-10)}{10-6} = \frac{6}{4} = \frac{3}{2}$

$y-(-4) = \frac{3}{2}(x-10)$

$y-(-10) = \frac{3}{2}(x-6)$