DIRECTIONS: Determine whether or not the relation is a function.

1. (2, 0), (5, −3), (8, −3), (11, 1)  
   Yes

2. (−3, −1), (−2, 6), (−3, 4), (2, −3)  
   No

DIRECTIONS: Determine the slopes of the lines on the graphs.

3. \(\frac{3}{4}\)

4. \(-5\)

DIRECTIONS: Find the slopes of the lines passing through the given points. Also state whether the lines are rising, falling, horizontal, or vertical.

5. (−3, 5), (6, 2)  
   \(-\frac{1}{3}\)

6. \(\left(\frac{1}{3}, \frac{5}{4}\right), \left(\frac{4}{3}, \frac{11}{4}\right)\)  
   \(\frac{3}{2}\)
**DIRECTIONS:** Determine whether the relationships between Line 1 & Line 2 is parallel, perpendicular, or neither.

7. Line 1: through $(0, 8)$ and $(-6, 0)$  
   Line 2: through $(-7, 6)$ and $(-3, 9)$  
   **Neither**

8. Line 1: through $(-8, -2)$ and $(-5, 4)$  
   Line 2: through $(0, 4)$ and $(1, 6)$  
   **Parallel**

**DIRECTIONS:** Graph the following equations. Use a straightedge to make your lines.

9. $y = -4x + 5$

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

11. $4x - 3y = -12$

12. $5x + 4y - 20 = 0$
DIRECTIONS: Evaluate the functions for the given value of $x$.

13. $f(x) = x + 7; \quad f(-5)$  
   $f(-5) = 2$

14. $f(x) = |4x + 1| + 2; \quad f(-7)$  
   $f(-7) = 29$

15. $f(x) = 3x^2 + 4x - 5; \quad f(3)$  
   $f(3) = 34$

16. $f(x) = 12; \quad f(9)$  
   $f(9) = 12$

DIRECTIONS: Write an equation in standard form ($Ax + By = C$) for the lines that are determined by the given information.

17. Slope is $-3$ and $y$-intercept is $(0, 6)$  
   $3x + y = 6$

18. Contains $(-2, 5)$ and slope is $3$  
   $3x - y = -11$

19. Contains $(-4, 2)$ and $(8, -6)$  
   $2x + 3y = -2$

20. Contains $(5, 9)$ and $(-1, -1)$  
   $5x - 3y = -2$

21. Contains $(2, 4)$ and is perpendicular to the line $y = -\frac{1}{2}x + 2$  
   $6x - y = 8$

22. Contains $(-1, 3)$ and is parallel to the line $y = 2x + 4$  
   $2x - y = -5$