

**Graphing Worksheet 34**

1. Consider the equation  $y = \frac{5}{3}x - 1$ .
  - (a) What is the slope of the graph of this equation?
  - (b) What is the slope of the lines parallel to the graph of this equation?
  - (c) What is the slope of the lines perpendicular to the graph of this equation?
  
2. Consider the equation  $2x + 8y = 12$ .
  - (a) What is the slope of the graph of this equation?
  - (b) What is the slope of the lines parallel to the graph of this equation?
  - (c) What is the slope of the lines perpendicular to the graph of this equation?
  
3. Consider the equation  $6x - 3y = 12$ .
  - (a) What is the slope of the graph of this equation?
  - (b) What is the slope of the lines parallel to the graph of this equation?
  - (c) What is the slope of the lines perpendicular to the graph of this equation?
  
4. Consider the equation  $12x + 4y = -16$ .
  - (a) What is the slope of the graph of this equation?
  - (b) What is the slope of the lines parallel to the graph of this equation?
  - (c) What is the slope of the lines perpendicular to the graph of this equation?

5. State whether each pair of equations has graphs that are *parallel*, *perpendicular*, or *neither*. Be sure to show your work.

(a)  $y = \frac{2}{3}x + 4$   
 $y = -\frac{2}{3}x + 6$

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

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

(d)  $y = \frac{3}{5}x + 8$   
 $5x + 3y = 18$

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

(f)  $y = 2x - 3$   
 $-2x - y = 6$

(g)  $y = -\frac{8}{3}x - 6$   
 $8x + 3y = 42$

(h)  $y = -\frac{8}{3}x - 6$   
 $3x - 8y = 40$

(i)  $y = -\frac{8}{3}x - 6$   
 $6x - 16y = 48$

(j)  $3x - 7y = 14$   
 $3x - 7y = -21$

(k)  $3x - 7y = 14$   
 $7x + 3y = 21$

(l)  $3x - 7y = 14$   
 $-3x + 7y = 21$