Name: _____ Date: _____

BLM 6.4.1

# Practice: Parallel and Perpendicular Lines

**1.** Graph each pair of lines on the same grid. Find the slope of each line. State whether the lines are parallel, perpendicular, or neither.

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

**b)** $y = \frac{4}{5}x + 3$ $y = -\frac{4}{5}x$

**c)** $y = 2x - 4$ $2x - y = 3$

**d)** $x - 4y + 2 = 0$ $y = -4x + 1$

**2.** The slopes of pairs of lines are given. Are the lines in each pair parallel, perpendicular, or neither?

**a)** $m = \frac{2}{3}$ $m = \frac{3}{2}$

**b)** $m = 1$ $m = -1$

**c)** $m = -2$ $m = -2$

**d)** $m = -3$ $m = \frac{1}{3}$

**e)** $m = \frac{-2}{5}$ $m = \frac{2}{-5}$

**f)** $m = -\frac{3}{4}$ $m = \frac{3}{4}$

**g)** $m = \frac{4}{5}$ $m = 0.8$

**h)** $m = \frac{3}{8}$ $m = -2\frac{2}{3}$

**3.** Find the slope of each line. Are the lines in each pair parallel, perpendicular, or neither?

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

**b)** $y = \frac{3}{5}x + 2$ $y = \frac{4}{5}x - 2$

**c)** $0 = 3x - y + 5$ $y = -3x - 1$

**d)** $x - 6y + 24 = 0$ $6x + y = 0$

**e)** $y = 3x + 4$ $6x - 2y = 10$

**f)** $x - y = 5$ $x + y = 1$

**4.** What is the slope of a line that is parallel to each line?

**a)** $y = 2x + 1$

**b)** $5x + y - 3 = 0$

**c)** $x - 3y = 4$

**d)** $y + 3 = 4x$

**5.** What is the slope of a line that is perpendicular to each line?

**a)** $y = \frac{3}{7}x - 3$

**b)** $2x - 4y + 1 = 0$

**c)** $y = 2x$

**d)** $6 - x + 2y = 0$

**6.** Write the equation of a line that is parallel to $4x + 3y = 1$.

**7.** Write the equation of a line that is perpendicular to $x - 5y = 2$.