

Without graphing find the number of solutions to each system of equations.

1.

$$y = 4x - 9$$

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

2.

$$y = 8x + 6$$

$$8x + y = 5$$

3.

$$y = -3x + 2$$

$$9x + 3y = 6$$

4.

$$y = 2x - 8$$

$$4x - 2y = -16$$

5.

$$y = 5$$

$$y = 5x + 8$$

6.

$$y = \frac{2}{3}x$$

$$12x - 18y = 13$$

Without graphing find the number of solutions to each system of equations.

1.

$$y = 4x - 9 \quad m = 4$$

$$y = -\frac{1}{4}x + 3 \quad m = -\frac{1}{4}$$

ONE SOL

2.

$$y = 8x + 6 \quad m = 8$$

$$8x + y = 5 \quad m = -8$$

$$-8x \quad -8x$$

$$y = -8x + 5$$

ONE SOL

3.

$$y = -3x + 2 \quad m = -3$$

$$9x + 3y = 6 \quad b = 2$$

$$3y = 6 - 9x$$

$$y = 2 - 3x \quad m = -3 \quad b = 2$$

Many SOLs

4.

$$y = 2x - 8 \quad m = 2$$

$$4x - 2y = -16 \quad b = -8$$

$$-2y = -16 - 4x$$

$$y = 8 + 2x \quad m = 2 \quad b = 8$$

NO SOL

5.

$$y = 5 \quad m = 0$$

$$y = 5x + 8 \quad m = 5$$

ONE SOL

6.

$$y = \frac{2}{3}x \quad m = \frac{2}{3} \quad b = 0$$

$$12x - 18y = 13$$

NO SOL

$$-18y = 13 - 12x$$

$$y = -\frac{13}{18} + \frac{2}{3}x \quad m = \frac{2}{3} \quad b = -\frac{13}{18}$$