

1-28

$$2(x + y = 5) \rightarrow 2x + 2y = 10$$

$$1(-2x - 2y = -10) \rightarrow \frac{-2x - 2y = -10}{0x + 0y = 0}$$

same line
infinitely many solutions
True

consistent & dependent

$$\begin{array}{r} x + y = 5 \\ -2x - 2y = -10 \end{array}$$

$$\begin{array}{r} x + y = 5 \\ -x \quad -y \\ \hline \end{array}$$

$$-2x - 2(-x + 5) = -10$$

$$y = -x + 5$$

$$-2x + 2x - 10 = -10$$

$$-10 = -10$$

TRUE
(same line)

infinitely many
solutions

consistent & dependent

2.

$$x + 2y = 6$$

$$x + 2y = -4$$

$$(-2y + 6) + 2y = -4$$

$$0y + 6 = -4$$

$$6 = -4$$

False

↓
no solution

$$\begin{array}{r} x + 2y = 6 \\ -2y \quad -2y \\ \hline \end{array}$$

$$x = -2y + 6$$

inconsistent

11.

$$Ax + By = C$$

$$2x + y = 8$$

$$m = \frac{-A}{B} = \frac{-2}{1}$$

$$m = -2$$

cons.
dependent

$$y = -2x + 8$$

$$y = mx + b$$

$$\begin{array}{r} 2x + y = 8 \\ -2x \quad \quad -2x \\ \hline \end{array}$$

$$\rightarrow y = -2x + 8$$

12. ① $\cancel{3x} - \boxed{y} = 3$ ② $y = 3x - 9$

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

$$y = 3x - 3$$

$$y = 3x - 9$$

inconsistent

Worksheet
Practice 7.4
(6-10)