Lesson 6.3 cont.. Finding missing slopes

Now your turn:

1. $(2, y)$ and $(-3, -2)$; slope: $\frac{3}{5}$

$x_1\ y_1$ $x_2\ y_2$ m

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{3}{5} = \frac{-2-y}{-3-2}$

$3(-5) = (-2-y)5$

$-15 = -10 - 5y$

$-15 + 10 = -5y$

$-5 = -5y$

$y = 1$

Alternate

$\frac{3}{-5} = \frac{-2-y}{-5}$

$-3 = -2 - y$

$-3 + 2 = -y$

$-1 = -y$

$1 = y$

2. $(x, 4)$ and $(-5, 10)$; slope: $\frac{3}{2}$

$x_1\ y_1$ $x_2\ y_2$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$\frac{3}{2} = \frac{10-4}{-5-x}$

$\frac{3}{2} = \frac{6}{-5-x}$

$\frac{2}{3} \times 2 = \frac{-5-x}{6}$

$4 = -5 - x$

$4 + 5 = -x$

$9 = -x$

$x = -9$

3. $(2, y)$ and $(7, 2)$; slope: $\frac{7}{5}$

$x_1\ y_1$ $x_2\ y_2$

$\frac{2-y}{7-2} = \frac{7}{5}$

$\frac{2-y}{5} = \frac{7}{5}$

$2 - y = 7$

$-y = 7 - 2$

$-y = 5$

$y = -5$

4. $(x, 9)$ and $(7, 6)$; slope: $\frac{3}{5}$

$x_1\ y_1$ $x_2\ y_2$

$\frac{3}{5} = \frac{6-9}{7-x} = \frac{-3}{7-x}$

$\frac{-1(5)}{-1(3)} = \frac{7-x}{-3}$

$-5 = 7 - x$

$-5 - 7 = -x$

$-12 = -x$

$12 = x$

Success Criteria

- I can find a missing coordinate, if given the slope