

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Graphing with Intercepts

- Determine the x-intercept and y-intercept of each line given below.
- Graph the lines on the same axes.
- Determine the point where the lines meet.

$$y = -6x + 6$$

x-intercept

$$y = -6x + 6$$

$$\downarrow$$

$$0 = -6x + 6$$

$$\begin{array}{r} -6 \\ +6 \end{array}$$

$$\underline{-6} = \underline{-6x}$$

$$\frac{-6}{-6} = \frac{-6x}{-6}$$

$$\boxed{1 = x}$$

y-intercept

$$y = -6x + 6$$

$$\boxed{y = 6}$$

$$6x + 12y + 12 = 0$$

x-intercept

$$6x + 12y + 12 = 0$$

$$6x + 12 = 0$$

$$\begin{array}{r} -12 \\ -12 \end{array}$$

$$\underline{6x} = \underline{-12}$$

$$\frac{6x}{6} = \frac{-12}{6}$$

$$\boxed{x = -2}$$

y-intercept

$$6x + 12y + 12 = 0$$

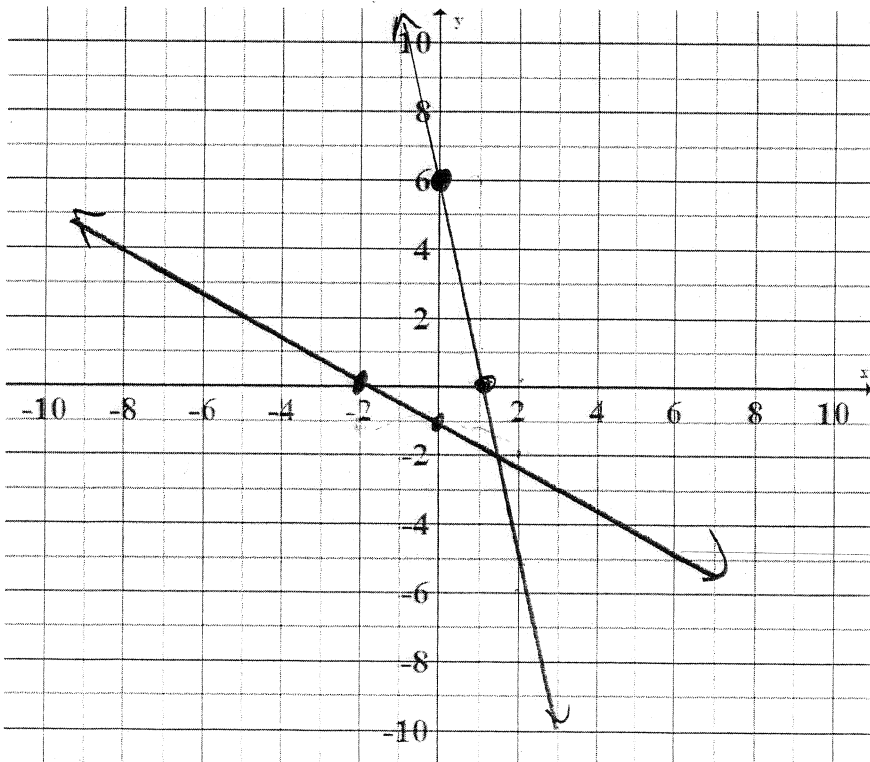
$$12y + 12 = 0$$

$$\begin{array}{r} -12 \\ -12 \end{array}$$

$$\underline{12y} = \underline{-12}$$

$$\frac{12y}{12} = \frac{-12}{12}$$

$$\boxed{y = -1}$$



The two lines intersect

at the point  $(\underline{1.5}, \underline{-2})$

*approximate*