

Learning Goal:

By the end of today, I will be able to find the intersection point of two lines.

## Linear Systems

"System" means we have more than ONE line to work with.

Reminder:

$y = mx + b$  is the equation of a line, where "m" is the slope and "b" is the y intercept (0,b)

Find the slope and y intercept for the following:

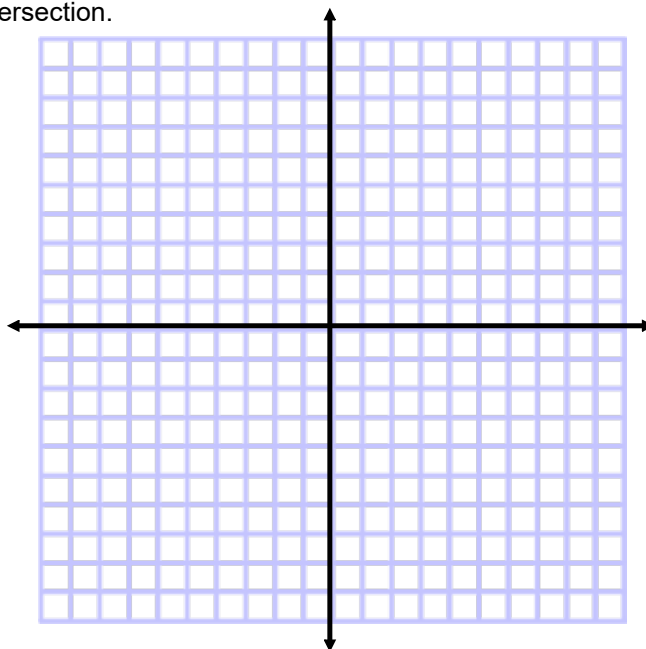
$$y = -3x + 8$$

Graph both sets of lines on the provided grid.  
Determine where they intersect.

Use graphing technology to verify the point of intersection.

$$y = x - 2$$

$$y = -3x + 10$$



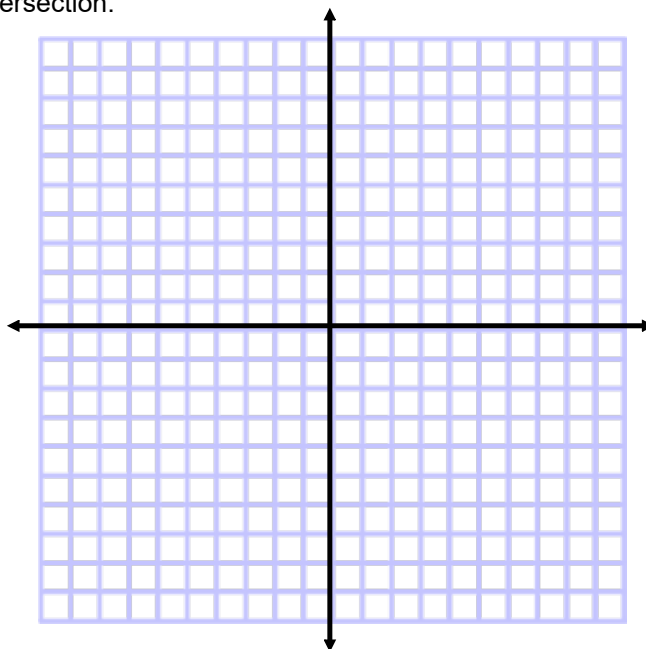
Graph both sets of lines on the provided grid.

Determine where they intersect.

Use graphing technology to verify the point of intersection.

$$y + 3x = 7$$

$$y + 3 = 2x$$



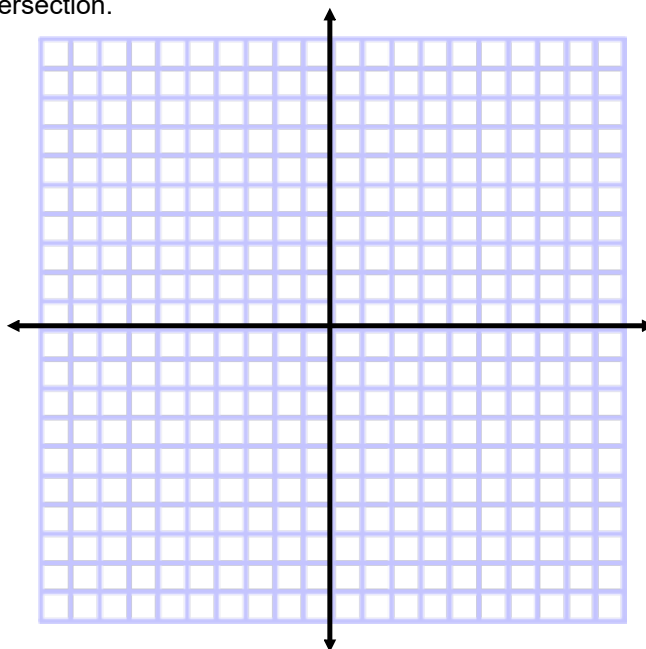
Graph both sets of lines on the provided grid.

Determine where they intersect.

Use graphing technology to verify the point of intersection.

$$y = -2x + 3$$

$$y = 7$$



Create a linear equation for the following:

(a) a pizza costs \$8 plus \$1 for each additional topping

(b) Jim is paid \$9.00 per hour

(c) the cost of a car is \$35,000, and decreases in value \$500 for every month you own it.

(d) a baby blue whale is 7m at birth, and grows 1m per month.

You are going away for the month of July and you need someone to look after your yard for you.

John will mow the lawn for a flat fee of \$32.00 for the entire month.

Adeeb is charging \$12.00 for everytime he mows the lawn during the month.

Who should you hire, and why?

## Consolidation Question

Page 245-46 #1, 3

Try by hand, and use Graphing technology.  
(DESMOS)