

1.) Solve for x:  $3x^2 + 29 = 56$ 

$$\begin{array}{r} 3x^2 + 29 = 56 \\ -29 \quad -29 \\ \hline 3x^2 = 27 \\ \frac{3}{3} \quad \frac{27}{3} \\ \sqrt{x^2} = \sqrt{9} \end{array}$$

$$x = \pm 3$$

2.) Solve for h:  $V = Bh$ 

$$\frac{3V}{B} = \frac{Bh}{B}$$

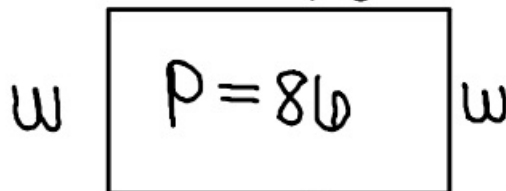
$$h = \frac{3V}{B}$$

3.) The length of a rectangle is 5 more than its width. If the rectangle has a perimeter of 86, what is the length of the rectangle?

L = ?

add 4 sides

$$L = w + 5$$



$$(w+5) + w + (w+5) + w = 86$$

$$\begin{array}{r} 4w + 10 = 86 \\ -10 \quad -10 \\ \hline 4w = 76 \end{array}$$

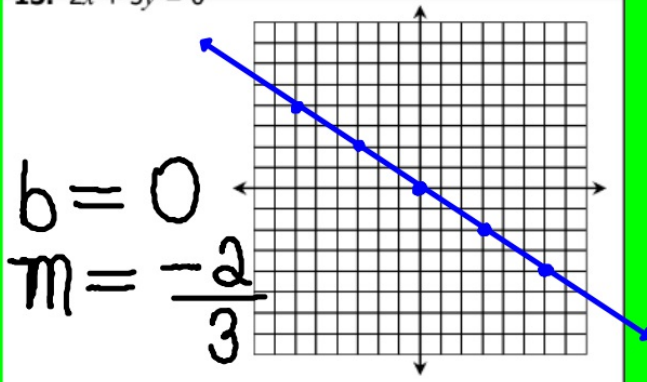
$$\begin{array}{r} 4w = 76 \\ \frac{4}{4} \quad \frac{76}{4} \\ \hline w = 19 \end{array}$$

$$\begin{array}{r} L = w + 5 \\ = 19 + 5 \end{array}$$

$$L = 24$$

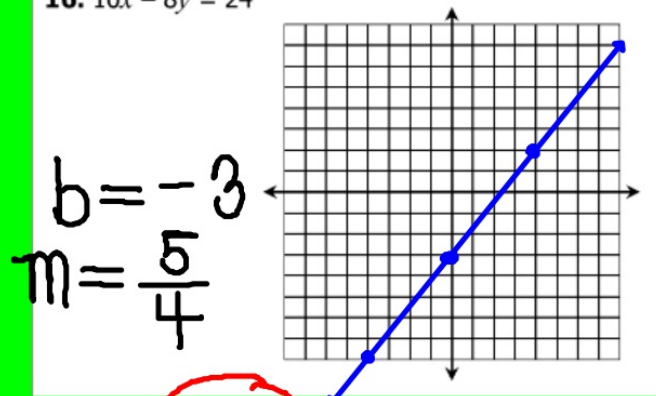
## Graphing Linear Equations Review

15.  $2x + 3y = 0$

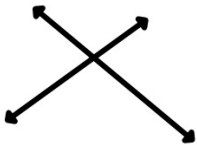
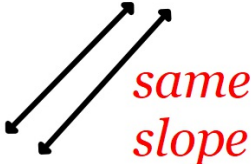
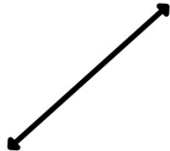


$$\begin{array}{r} 2x + 3y = 0 \\ -2x \quad \quad -2x \\ \hline 3y = -2x \\ \frac{3y}{3} = \frac{-2x}{3} \\ y = -\frac{2}{3}x \end{array}$$

16.  $10x - 8y = 24$

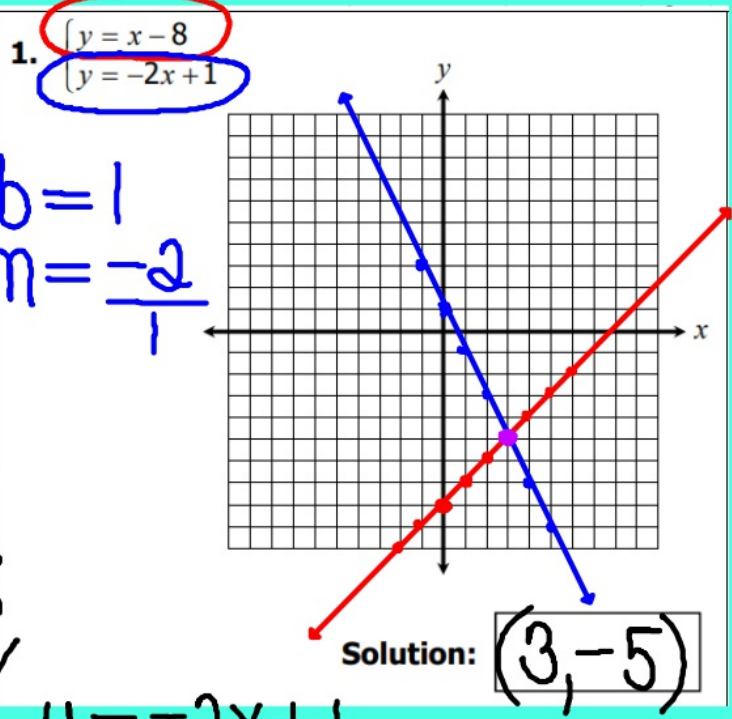


$$\begin{array}{r} 10x - 8y = 24 \\ -10x \quad \quad -10x \\ \hline -8y = -10x + 24 \\ \frac{-8y}{-8} = \frac{-10x}{-8} + \frac{24}{-8} \\ y = \frac{5}{4}x - 3 \end{array}$$

<b>SYSTEMS OF EQUATIONS</b>	a set of two or more equations		
	with the same set of unknowns.		
<i>The SOLUTION to a System</i>	Graphically: The point $(x, y)$ where the two lines <u>intersect</u> .		
	Algebraically: The point $(x, y)$ that makes both equations <u>equal</u> .		
<b>TYPES OF SOLUTIONS</b>	<b>INTERSECTING LINES</b> 	<b>PARALLEL LINES</b> 	<b>SAME LINE</b> 
	<b>ONE SOLUTION</b> $(x, y)$	<b>NO SOLUTION</b> <b>NS</b>	<b>INFINITE SOLUTION</b> <b>INF SOL.</b>

<b>SOLVING SYSTEMS BY GRAPHING</b>	1) Solve both equations for $y = mx + b$
	2) Graph using slope and y-intercept
	3) Determine the solution

# One Solution (x,y)



$$b = -8$$
$$m = \frac{1}{1}$$

$$b = 1$$
$$m = \frac{-2}{1}$$

$$y = x - 8$$

$$-5 = 3 - 8$$

$$-5 = -5 \checkmark$$

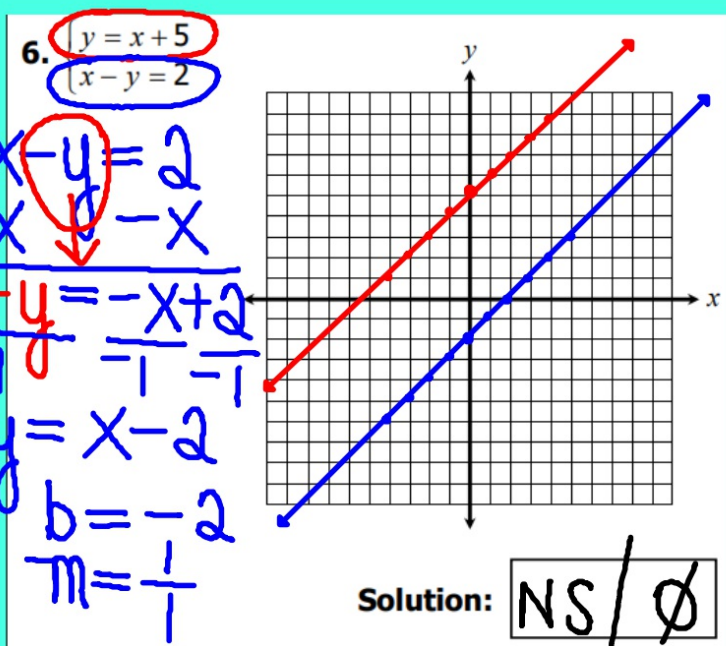
$$y = -2x + 1$$

$$-5 = -2(3) + 1$$

$$\checkmark -5 = -6 + 1$$

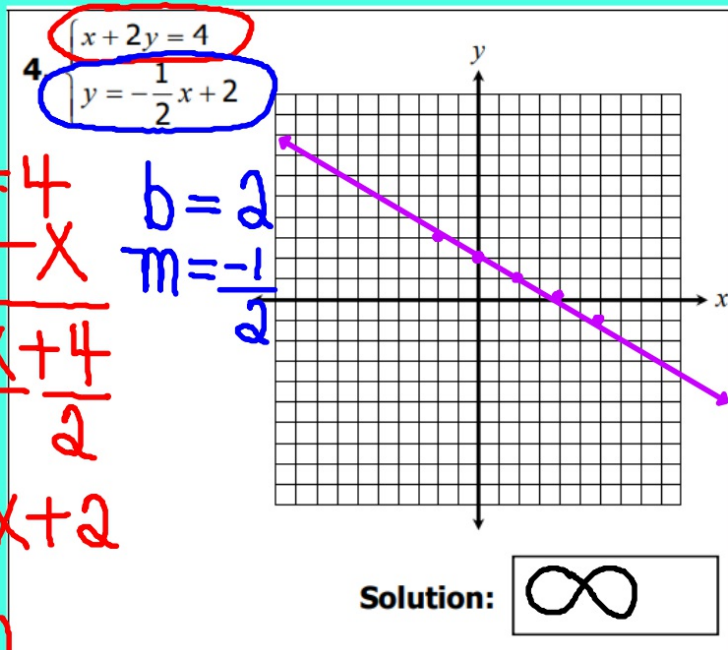
$$-5 = -5$$

# No Solution



$$b = 5$$
$$m = 1$$

# Infinite Solutions



$$\begin{array}{r} x + 2y = 4 \\ -x \quad \quad \quad -x \\ \hline 2y = -x + 4 \\ \frac{2y}{2} = \frac{-x + 4}{2} \\ y = -\frac{1}{2}x + 2 \end{array}$$

$b = 2$   
 $m = -\frac{1}{2}$