

BE-1A | TUESDAY 1-20-09

- ① SOLVE $-2x + 6y = 12x + 18$ for y
 - ② Why is "for y " a necessary part of the instructions for #①?
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③ GRAPH: $y = 2x + 3$

Tip: Use A T-Table

Tip: WHAT is the domain assumed to be when it is NOT given?

- RETURN/REVIEW • Homework #2
 - Quiz #2
- MAKE-UP QUIZZES

AN EQUATION WITH 2 VARIABLES CAN be graphed, ONE of the VARIABLES will be the domain (OR independent variable), the other will be the range (OR dependent variable).

X is our most common variable for the domain. Y is the most common variable for the range.

IF NO domain is given, ASSUME it is "all real numbers". You can pick ANY X to find its Y, $X = \{-2, -1, 0, 1, 2\}$ ARE good "starting" values for your T-Table.

Here are some common Equations you can graph - which ones will graph as a line? How do you know?

$$y = 2x + 3$$

$$y = 3x^2 + 1$$

$$xy = 8$$

$$\frac{1}{x} = 12$$

$$-2x + 4y + 2y = 10x + 18$$

$$\begin{array}{ccccccc} \Downarrow & \Downarrow & \Downarrow & \Downarrow & \Downarrow \\ -2x' + 4y' + 2y' = 10x' + 18 \end{array}$$

Only x' , y' , and number terms, and if each term is only being added or subtracted, graph will ALWAYS be a line.

If $-2x + 4y + 2y = 10x + 18$ is
 A "Linear Equation", then you can
 Always combine "like" terms and get
 A single x , y and number term.

$$-2x + 4y + 2y = 10x + 18$$

$$-2x + 6y = 10x + 18$$

$$+2x$$

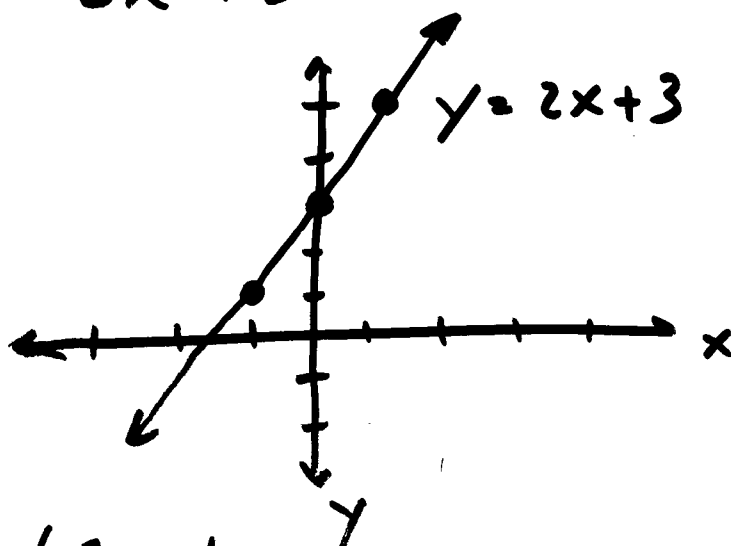
$$+2x$$

$$\frac{6y}{6} = \frac{12x + 18}{6}$$

Solve for y

$$y = 2x + 3$$

x	$y = 2x + 3$
-1	$2(-1) + 3 = 1$
0	$2(0) + 3 = 3$
1	$2(1) + 3 = 5$



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TIP

you know it is a line, need 2 points
 plus a "check" point, use easy x values

Find the slope of the line
you just graphed: $y = 2x + 3$

x	y
-1	1
0	3
1	5

Use any two points on
the line:

ⓔx $(-1, 1), (0, 3)$

$$\frac{3-1}{0-(-1)} = \frac{2}{1} = \boxed{2 = m}$$

ⓔx $(0, 3), (1, 5)$

$$\frac{5-3}{1-0} = \frac{2}{1} = \boxed{2 = m}$$

ⓔx $(-1, 1), (1, 5)$

$$\frac{5-1}{1-(-1)} = \frac{4}{2} = \frac{2}{1} = \boxed{2 = m}$$

Homework: Pg 83 / Lesson 5-1 # 1-10