

Graphing Worksheet

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Names _____

Preliminary Setup:- (Resetting the calculator)

Turn [ON] the calculator (located on the bottom left of the calculator)

Press [2nd] then [+] for mem

Select the Reset option (on TI82's #3 and on TI83's #2) followed by option #2 (on TI82's Reset and on TI83's Default)
now on TI83's select option #2: Reset then press [ENTER]

Turn the calculator OFF by selecting [2nd] then [ON]

Turn the calculator [ON] If you do not see anything on the screen tell your teacher.

Positive and negative slopes

1) Graph: $y = 2x$ and $y = 5x$ and $y = \frac{3}{4}x$ and $y = \frac{1}{3}x$

Step 1:


a) Press [Y=], located top left, and then after the $Y_1 =$ enter [2] [X,T,θ] so that it looks like: $Y_1 = 2x$

b) Press the blue [down arrow] (or the ENTER key) so that the cursor is now after the $Y_2 =$ and then after the $Y_2 =$ enter [5] [X,T,θ] so that it looks like: $Y_2 = 5x$

c) Press the blue [down arrow] (or the ENTER key) so that the cursor is now after the $Y_3 =$ and then after the $Y_3 =$ enter [(] [3] [] [4] [)] [X,T,θ] so that it looks like: $Y_3 = (3/4)x$

d) Press the blue [down arrow] (or the ENTER key) so that the cursor is now after the $Y_4 =$ and then after the $Y_4 =$ enter [(] [1] [] [3] [)] [X,T,θ] so that it looks like: $Y_4 = (1/3)x$

Step 2: Press [GRAPH] (located at the top right)

1) Answer: Do the graphs slant *up* or *down* as they go from left to right?  1) _____


2) Graph: $y = -2x$ and $y = -5x$ and $y = -\frac{3}{4}x$ and $y = -\frac{1}{3}x$

(Note: Use the (-) key next to the ENTER key at the bottom; do not use the blue minus key above the [+] key.)

(Note: You can quickly *insert* the negative sign in front of the $y =$ equations from above by using the [ins] key. Press [Y=] then move the cursor to on top of the 2 in the $Y_1 =$ equation. Press [2nd] then [del] then [(-)].)


Step 1: Press [Y=] and enter the above after Y_1 , Y_2 , Y_3 , and Y_4

Step 2: Press [GRAPH]

2) Answer: Do the graphs slant *up* or *down* as they go from left to right?  2) _____

Summary: Based on the answers to A) and B) above answer the following, given an equation $y = ax$:

3) If the graphed line slants *up* as you go from left to right, then 'a' is positive or negative?  3) _____

4) If the graphed line slants *down* as you go from left to right, then 'a' is positive or negative?  4) _____