

Graphing using a calculator

Practice graphing in using your calculator

1. To Graph:

Press the **Y=** key on the top of the calculator.

Press **CLEAR** if there is an equation already next to Y_1 .

2. Type in the following equation: $y = 3x + 2$.

The x key is near the alpha key: **X, T, θ , n**.

Press the **WINDOW** button.

Type in the following values

x-min: -23.5

x-max: 23.5

x-scl: 1

y-min: -15.5

y-max: 15.5

y-scl: 1

Press **GRAPH**.

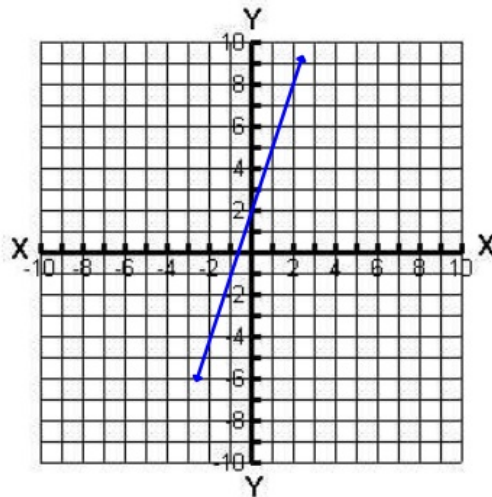
3. To Find Points on the Line:

Press the **TRACE** button.

At the bottom of the screen you will see x and y coordinates on the graph.

Press the *arrows* to move right and left. $X=$ and $Y=$ should appear at the bottom of the screen.

4. Draw the line $y = 3x + 2$ on the graph below using the points displayed when you trace the line. Try to be as accurate as you can (*you can use a straight edge of a ruler or piece of paper*).



5. Graph $y = \frac{1}{2}x - 5$

Press the **Y=** key on the top of the calculator.

Press **CLEAR** in Y_1 .

6. Type in the following equation: $Y_1 = (1+2)x - 5$.

Use the *blue* **-** subtract button on the side (not the *gray* **(-)** negative button at the bottom)

Press the **GRAPH** button.

7. To Find Points on the Line:

Press the **TRACE** button.

At the bottom of the screen you will see x and y coordinates on the graph.

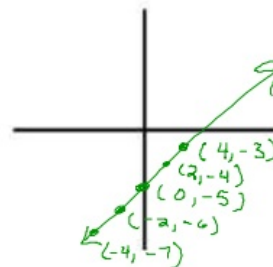
Press the *arrows* to move right and left. $X=$ and $Y=$ should appear at the bottom of the screen.

8. Graph the line and create a table of values.

Draw the graph on the axis below.

Fill in the table of values.

Label the points on the graph.



x	$f(x)$
4	-3
2	-4
0	-5
-2	-6
-4	-7

9. Evaluate the function $f(x) = \frac{1}{2}x - 5$ for the given values of x . You must show your work!

$$\begin{aligned} f(4) &= \frac{1}{2}(4) - 5 \\ &= 2 - 5 \\ &= -3 \end{aligned}$$

$$\begin{aligned} f(0) &= \frac{1}{2}(0) - 5 \\ &= -5 \end{aligned}$$

$$\begin{aligned} f(-4) &= \frac{1}{2}(-4) - 5 \\ &= -7 \end{aligned}$$

10. Graph $y = (x-2)^2 + 3$

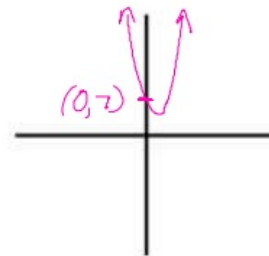
Press the **Y=** key on the top of the calculator.

Press **CLEAR** in Y_1 .

11. Type in the following equation: $Y_1 = (x-2)^2 + 3$.

Use the **x^2** button in the far left column for the square.

Press the **GRAPH** button.



x	$f(x)$
5	12
2	3
0	7
-2	19
-3	28

12. Graph the parabola and create a table of values.

Draw the graph on the axis below.

Fill in the table of values.

Label the points on the graph.

13. Evaluate the function $g(x) = (x-2)^2 + 3$ for the given values of x . You must show your work!

$$\begin{aligned} g(5) &= (5-2)^2 + 3 \\ &= 9 + 3 \\ &= 12 \end{aligned}$$

$$\begin{aligned} g(2) &= (2-2)^2 + 3 \\ &= 3 \end{aligned}$$

$$\begin{aligned} g(0) &= (0-2)^2 + 3 \\ &= (-2)^2 + 3 \\ &= 4 + 3 \\ &= 7 \end{aligned}$$

$$\begin{aligned} g(-2) &= (-2-2)^2 + 3 \\ &= (-4)^2 + 3 \\ &= 16 + 3 \\ &= 19 \end{aligned}$$

Graphing using a calculator

Assignment

Name: _____

Period: _____ Date: _____

For each equation:

Graph the equation using a graphing calculator.

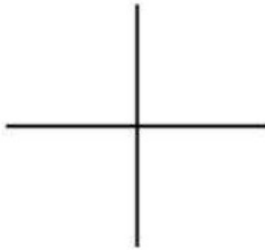
Draw the graph on the axis provided.

Fill in the table of values.

Label the corresponding points on the graph.

Evaluate the corresponding function to show the values match

1. $f(x) = (x+4)^2 - 3$



x	f(x)
1	
0	
-4	
-8	

$f(1) =$

$f(0) =$

$f(-4) =$

$f(-8) =$

2. $g(x) = (x-5)^2 - 3$



x	g(x)
11	
10	
5	
0	

$g(11) =$

$g(10) =$

$g(5) =$

$g(0) =$

3. $h(x) = 2x - 4$



x	h(x)
5	
2	
0	
-3	

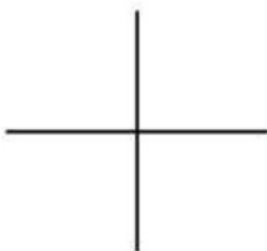
$h(5) =$

$h(2) =$

$h(0) =$

$h(-3) =$

4. $c(t) = \frac{1}{3}t + 2$ (You will still use \boxed{x} in the calculator)



t	$c(t)$
6	
3	
0	
-6	

$c(6) =$

$c(3) =$

$c(0) =$

$c(-6) =$

5. $s(h) = -\frac{2}{5}h + 4$ (You will still use \boxed{x} in the calculator **and** use the *gray* $\boxed{-}$ negative button at the bottom)



h	$s(h)$
15	
10	
0	
-5	

$s(15) =$

$s(10) =$

$s(0) =$

$s(-5) =$

6. $f(x) = -(x-4)^2 + 5$ (use the *gray* $\boxed{-}$ negative button at the bottom, then the *blue* $\boxed{-}$ subtract button)



x	$f(x)$
9	
8	
4	
0	

$f(9) =$

$f(8) =$

$f(4) =$

$f(0) =$

7. $h(t) = (t-3)^2 + 5$ (use the *blue* $\boxed{-}$ subtract button at the bottom)



t	$h(t)$
6	
3	
0	
-2	

$h(6) =$

$h(3) =$

$h(0) =$

$h(-2) =$