

Warm Up:

Evaluate the following expressions:

$3x+1 \quad \text{when } x=-2$

$$-5$$

$5x^2+1 \quad \text{when } x=-1$

$$6$$

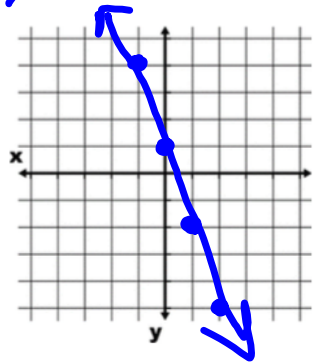
$|x+2| \quad \text{when } x=-5$

$$\begin{array}{l} |-5+2| \\ |-3| = 3 \end{array}$$

Review homework

$f(x) = -3x + 1$

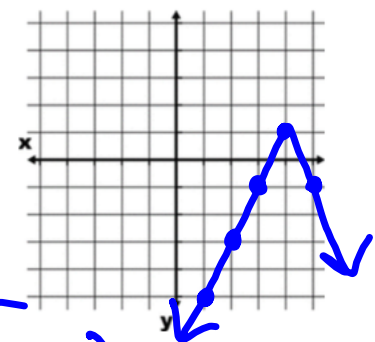
x	f(x)
2	-5
1	-2
0	1
-1	4



Type of Function:  
linear

$y = -2|x - 4| + 1$

x	y
4	1
3	-1
2	-3
1	-5



Type of Function:  
non linear  
(abs. value function)

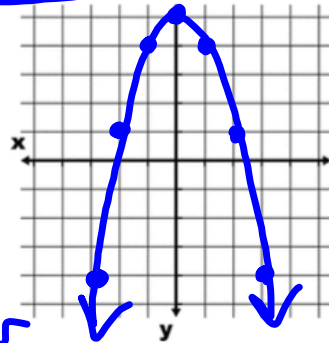
$$-2|4-4|+1$$

$$-2|0|+1$$

$$-2(0)+1$$

$y = -x^2 + 5$   $-(1)^2 + 5$

x	y
1	5
2	4
3	5
4	5
5	5



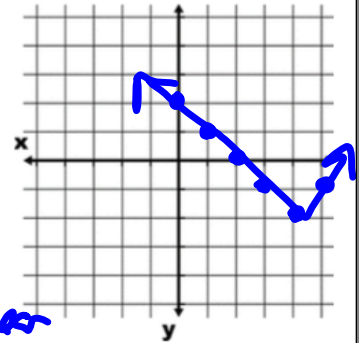
$-(3)^2 + 5$   
 $-9 + 5$

Type of Function:

non-linear  
(Quadratic)

$y = |x - 4| - 2$

x	y



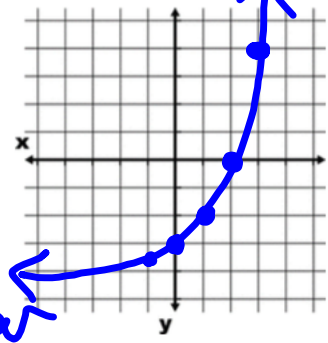
Type of Function:

non-linear  
(abs. value)

$y = 2^x - 4$

$2^{-1} = \frac{1}{2}$

x	y
0	3
1	5
2	10
3	20
4	40

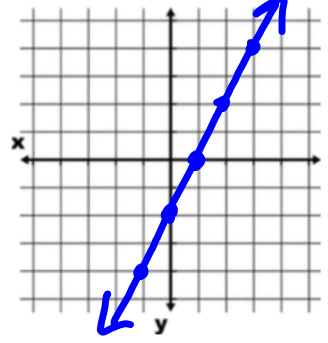


Type of Function:

non-linear  
(exponential)

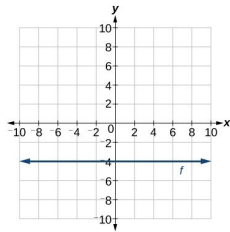
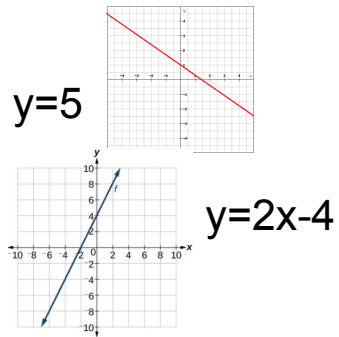
$y = 2x - 2$

x	y



Type of Function:

## Linear



## Non-Linear

