

## Function Notation with Graphs

1) Given this graph of the function  $f(x)$ , find the following:



$$f(-4) = 2$$

$$f(0) = 0$$

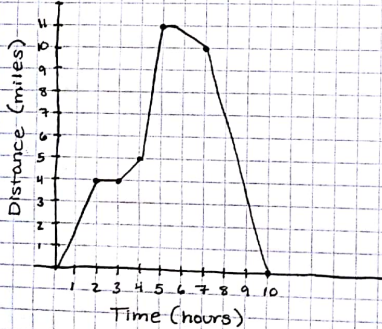
$$f(3) = -1.75$$

$$f(-5) = 0$$

x when  $f(x) = 2 \rightarrow x = -4$  and  $x = -0.75$

x when  $f(x) = 0 \rightarrow x = -5$  and  $x = 0$

2) The function  $d(t)$  represents Gulliver's distance from home after  $t$  hours. Use the graph to find each of the following



$d(2) = 4$  After 2 hours, he's 4 mi. from home.

$d(5) = 11$  After 5 hours, he's 11 mi. from home.

$d(2.9) = 4$  After 2.9 hours he's 4 mi. from home.

$d(10) = 0$  After 10 hours, he made it back home.

$$d(t) = 2$$

$$d(t) = 5$$

$$d(t) = 0$$

$$t = 1 \text{ and } t = 9.5$$

$$t = 4 \text{ and } t = 8.5$$

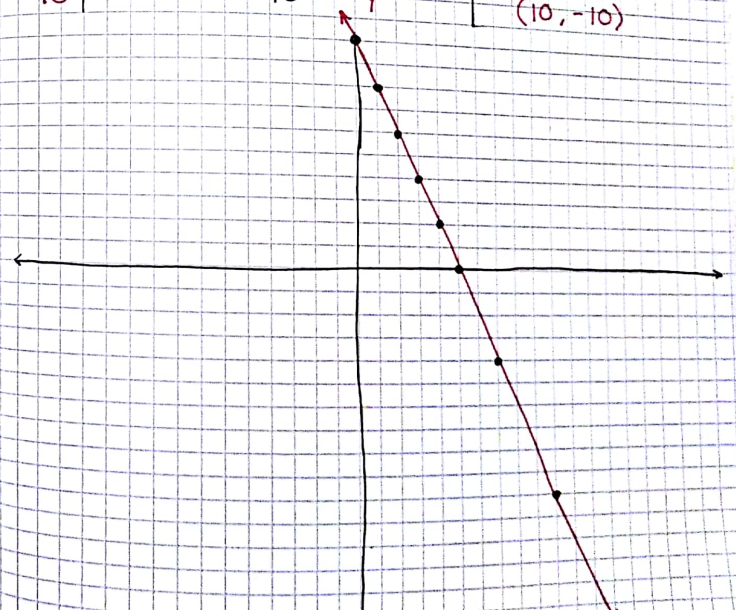
$$t = 0 \text{ and } t = 10$$

It took him 1 hour to be 2 miles from home.

It took 10 hours to be home!

3) Given  $f(x) = 10 - 2x$ , fill out the following table, then sketch a graph.

x	$f(x)$ "y"	Coordinate Point
0	$10 - 2(0) = 10$	(0, 10)
1	$10 - 2(1) = 8$	(1, 8)
2	$10 - 2(2) = 6$	(2, 6)
3	$10 - 2(3) = 4$	(3, 4)
4	$10 - 2(4) = 2$	(4, 2)
7	$-4 \leftarrow y$	(7, -4)
5	$0 \leftarrow y$	(5, 0)
10	$-10 \leftarrow y$	(10, -10)



4. Given  $f(x) = \frac{3}{2}x - 4$ , fill out the following table, then sketch a graph:

X	$f(x)$	Coordinate Point
-4	$\frac{3}{2}(-4) - 4 = -10$	$(-4, -10)$
-2	$\frac{3}{2}(-2) - 4 = -7$	$(-2, -7)$
0	$\frac{3}{2}(0) - 4 = -4$	$(0, -4)$
2	$\frac{3}{2}(2) - 4 = -1$	$(2, -1)$
4	$\frac{3}{2}(4) - 4 = 2$	$(4, 2)$
6	5 ← y	$(6, 5)$
8	8 ← y	$(8, 8)$

