

Answer Key

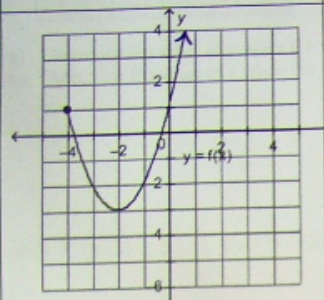
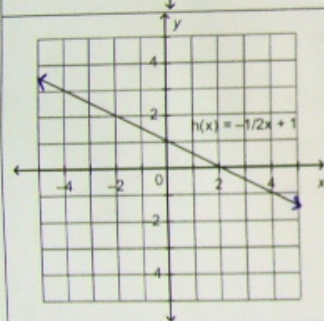
Domain/Range Function/Nonfunction Function Notation Reading Graphs

1. Identify the domain, range and if each is a function or non-function?

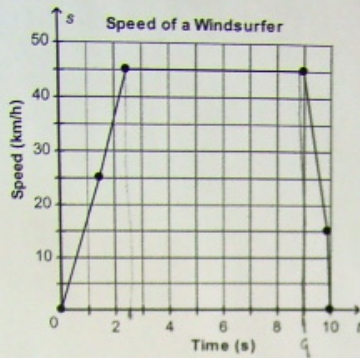
	Domain	Range	
a) $\{(0,0), (5,1), (10,2), (15, 3), (20,4)\}$	0, 5, 10, 15, 20	0, 1, 2, 3, 4	F
b) $\{(0,3), (0,1), (1,2), (2, 3), (4,4)\}$	0, 1, 2, 4	3, 1, 2, 4	NF
c) $\{(0,5), (5,6), (1,2), (7, 9), (15,4)\}$	0, 5, 1, 7, 15	5, 6, 2, 9, 4	F
d) $\{(0,6), (8,1), (10,1), (15, 3), (20,4)\}$	0, 8, 10, 15, 20	6, 1, 3, 4	F
e) $\{(10,8), (16,4), (12,7), (10, 3), (19,6)\}$	10, 16, 12, 19	8, 4, 7, 3, 6	NF

2. Complete the chart:

Relation	Domain	Range	Function /Nonfunction
<p>Speed of a Windsurfer</p>	$\{x \mid 0 \leq x \leq 10, x \in \mathbb{R}\}$	$\{y \mid 0 \leq y \leq 45, y \in \mathbb{R}\}$	F

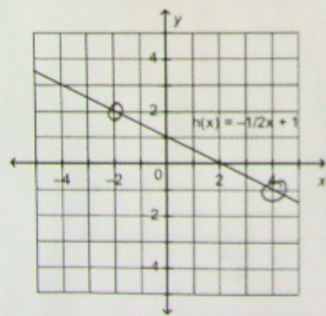
	$\{x \mid -4 \leq x < \infty, x \in \mathbb{R}\}$	$\{y \mid -3 \leq y < \infty, y \in \mathbb{R}\}$	\mathbb{T}
	$\{x \mid -\infty \leq x < \infty, x \in \mathbb{R}\}$	$\{y \mid -\infty \leq y < \infty, y \in \mathbb{R}\}$	\mathbb{T}

3. This graph shows the speed of a windsurfer, s , as a function of time, t .



- a) How long did the windsurfing last? *10 seconds*
- b) How long was the windsurfer's speed 45km/h? *6.5 seconds*

4. This is a graph of the function



- a) Determine the value of y when the x value is -2 . *$y = 2$*
- b) Determine the value of x when the y value is -1 . *$x = 4$*

6.

$$a(x) = 3(x-2) + 5 \quad t(x) = -15x + 7 \quad m(x) = 5x^2 - 9 \quad h(x) = \frac{1}{2}x - 11$$

a) $a(x) = 68$

$$a(x) = 3(x-2) + 5$$

$$68 = 3(x-2) + 5$$

$$68 - 5 = 3x - 6 + 5$$

$$63 = 3x - 6 + 6$$

$$\frac{69}{3} = \frac{3x}{3}$$

$$23 = x$$

b) $t(x) = 862$

$$t(x) = -15x + 7$$

$$862 = -15x + 7$$

$$855 = -15x$$

$$-57 = x$$

c) $a(10)$

$$a(x) = 3(x-2) + 5$$

$$a(10) = 3(10-2) + 5$$

$$a(10) = 3(8) + 5$$

$$a(10) = 24 + 5$$

$$a(10) = 29$$

d) $h(100)$

$$h(x) = \frac{1}{2}x - 11$$

$$h(100) = \frac{1}{2}(100) - 11$$

$$h(100) = 50 - 11$$

$$h(100) = 39$$

e) $m(a(5))$

$$a(x) = 3(x-2) + 5$$

$$a(5) = 3(5-2) + 5$$

$$= 3(3) + 5$$

$$= 9 + 5$$

$$= 14$$

$$m(x) = 5x^2 - 9$$

$$m(14) = 5(14)^2 - 9$$

$$m(14) = 5(196) - 9$$

$$m(14) = 980 - 9$$

$$= 971$$

f) $h(30) + m(5)$

$$4 + 116$$

$$\frac{120}{120}$$

$$h(x) = \frac{1}{2}x - 11$$

$$h(30) = \frac{1}{2}(30) - 11$$

$$h(30) = 15 - 11$$

$$h(30) = 4$$

$$m(x) = 5x^2 - 9$$

$$m(5) = 5(5)^2 - 9$$

$$m(5) = 5(25) - 9$$

$$m(5) = 125 - 9$$

$$m(5) = 116$$