

Domain/Range Function/Nonfunction Function Notation Reading Graphs

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

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

a) domain: $(0, 5, 10, 15, 20)$
 range: $(0, 1, 2, 3, 4)$
 Function

b) domain: $(0, 1, 2, 4)$
 range: $(1, 2, 3, 4)$
 Non Function

c) domain: $(0, 5, 1, 7, 15)$
 range: $(5, 6, 2, 9, 4)$
 Function

d) domain: $(0, 8, 10, 15, 20)$
 range: $(6, 1, 3, 4)$ Func

2. Complete the chart:

e) domain: $(10, 16, 12, 10, 19)$
 range: $(8, 4, 7, 3, 6)$
 Non Function

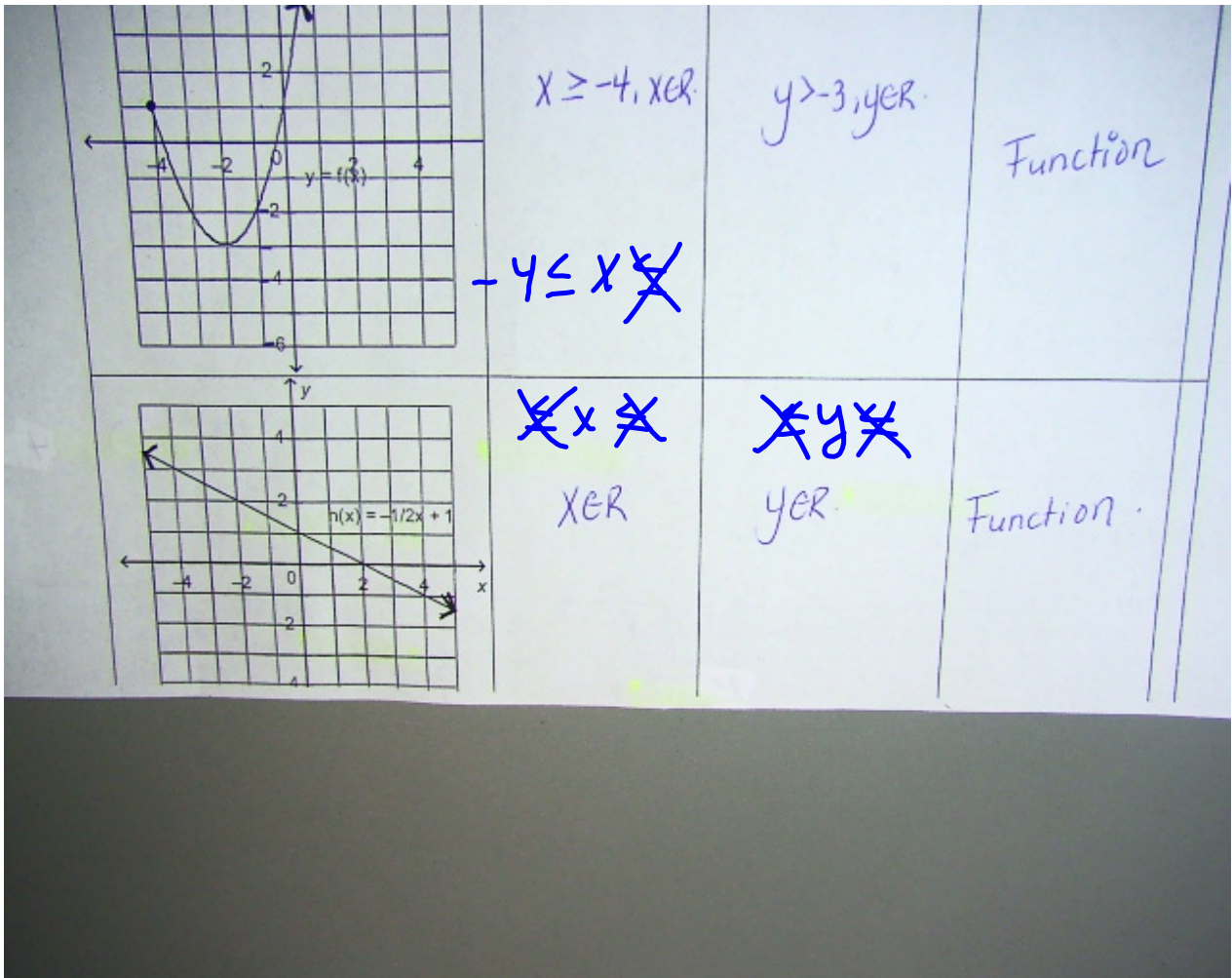
Relation	Domain	Range	Function / Nonfunction
<p>Speed of a Windsurfer</p>	$0 \leq x \leq 10, x \in \mathbb{R}$	$0 \leq y \leq 45, y \in \mathbb{R}$	Function

2. Complete the chart:

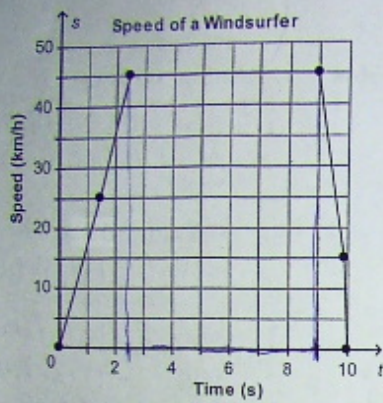
range: $\{0, 10, 15, 20\}$
Function.

d) domain: $(0, 8, 10, 15, 20)$
range: $(6, 1, 3, 4)$ Function

Relation	Domain	Range	Function / Nonfunction
<p>Speed of a Windsurfer</p>	$0 \leq x \leq 10, x \in \mathbb{R}$	$0 \leq y \leq 45, y \in \mathbb{R}$	Function.
<p>$y = f(x)$</p>	$-4 \leq x$ $x \geq -4, x \in \mathbb{R}$	$-3 = y$ $y \geq -3, y \in \mathbb{R}$	Function

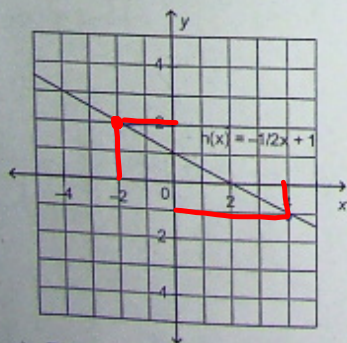


3. This graph shows the speed of a windsurfer, s , as a function of time, t .



- 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 .
 b) Determine the value of x when the y value is -1 .

$y = 2$
 $x = 4$

6.

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

a) $a(x) = 68$

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

$$\frac{3(x-2)}{3} = \frac{63}{3}$$

$$x-2 = 21 + 2$$

$a(5)$

$$\begin{aligned} &= 3(5-2) + 5 \\ &= 3(3) + 5 \\ &= 9 + 5 \\ &= 14 \end{aligned}$$

$$x = 23$$

b) $t(x) = 862$

$$-15x + 7 = 862 - 7$$

$$\frac{-15x}{-15} = \frac{855}{-15}$$

$$x = -57$$

c) $a(10)$

$$a(10)$$

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

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

$$= 3(8) + 5$$

$$= 24 + 5$$

$$a(10) = 29$$

d) $h(100)$

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

$$= \frac{100}{2} - 11$$

$$= 50 - 11$$

$$h(100) = 39$$

$a(5) = 14$

e) $m(5)$

$$\begin{aligned} m(14) &= 5(14)^2 - 9 \\ &= 5(196) - 9 \\ &= 980 - 9 \\ &= 971 \end{aligned}$$

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

$$4 + 116 = 120$$

$$\begin{aligned} h(30) &= \frac{1}{2}(30) - 11 \\ &= 15 - 11 \\ &= 4 \end{aligned}$$

$$\begin{aligned} m(5) &= 5(5)^2 - 9 \\ &= 5(25) - 9 \\ &= 125 - 9 \\ &= 116 \end{aligned}$$