




Check Your Understanding – Situational Problem Review

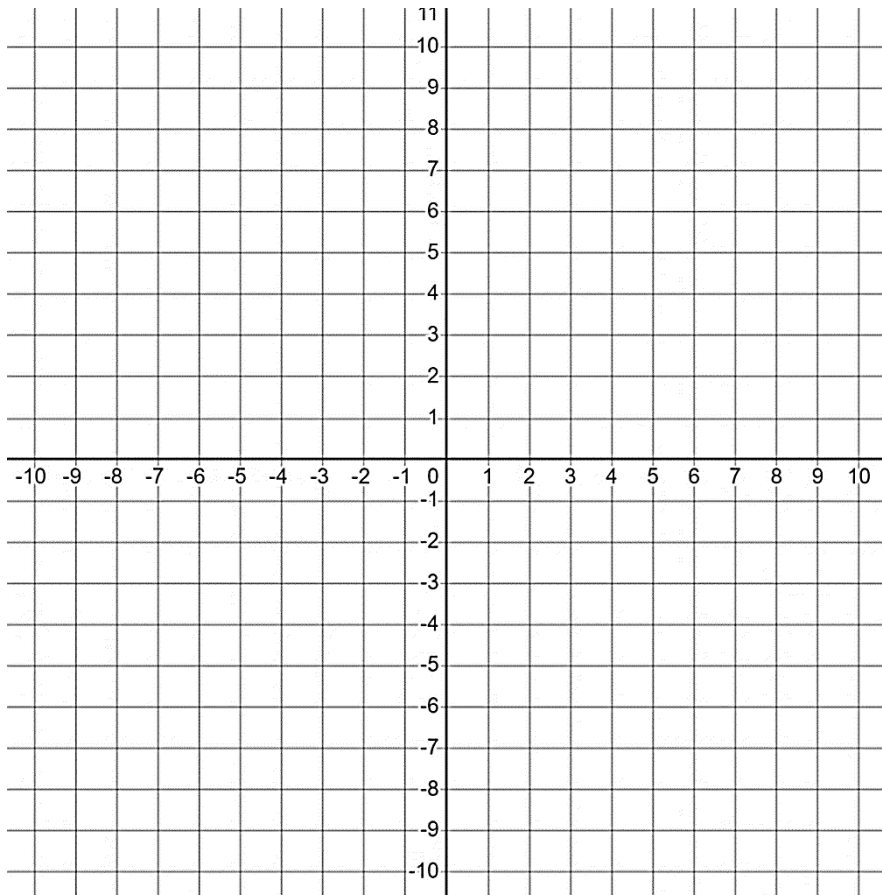
The table below identifies the key concepts from this unit.

1. Check your understanding by completing these questions.
2. Check your answers in the key provided.
3. In the table below, highlight the questions you got correct.
4. Ask peers/Dr. James about concepts where you can improve.

Key Concepts	 Mild	 Medium	 Spicy
The Cartesian Plane and Plotting Points	1		
The Function Machine	2, 4, 6	3, 5, 7	
Relations and Functions			

1. In the Cartesian Plane provided below, label the following:

- a. x-axis
- b. y-axis
- c. the point $(0, 0)$, called the origin
- d. the following points: $(3, 2)$, $(-4, 6)$, $(-8, -9)$, $(7, -1)$



2. For the function machine below, complete the table of values

The function machine completes the following:

- 1) multiplies the input by 3
- 2) then add 5

Input	Output
-4	
0	
8	
x	

3. For the function machine below, complete the table of values (select your own inputs)

The function machine completes the following:

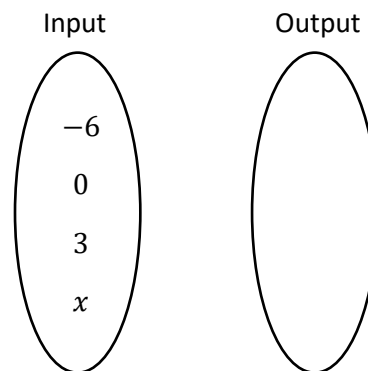
- 1) multiplies the input by $-\frac{1}{2}$
- 2) then subtract 4

Input	Output
x	

4. For the function machine below, complete the following map

The function machine completes the following:

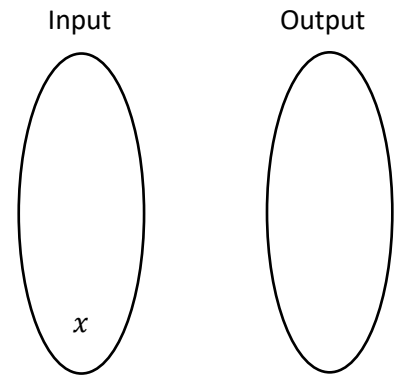
- 1) multiplies the input by 2
- 2) then subtracts 8



5. For the function machine below, complete the following map (select your own 3 inputs)

The function machine completes the following:

- 1) multiplies the input by $\frac{3}{4}$
- 2) then adds 1



6. For the function machine below, complete the following ordered pairs

The function machine completes the following:

$(-3, \quad), (0, \quad), (-5, \quad), (7, \quad)$

- 1) multiplies the input by 8
- 2) then adds 0

7. For the function machine below, select 4 inputs and write the results as ordered pairs

The function machine completes the following:

- 1) multiplies the input by $-\frac{4}{5}$
- 2) then subtracts 2

8. Remember that all functions are also relations, but not all relations are functions. Identify whether each of the following represents only a relation or a function (and so also a relation)

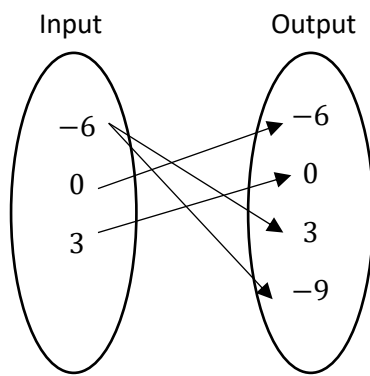
a)

Input	Output
-4	8
0	4
8	8
12	16

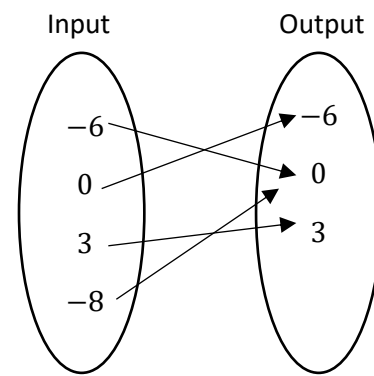
b)

Input	Output
-4	8
0	0
-4	12
12	16

c)



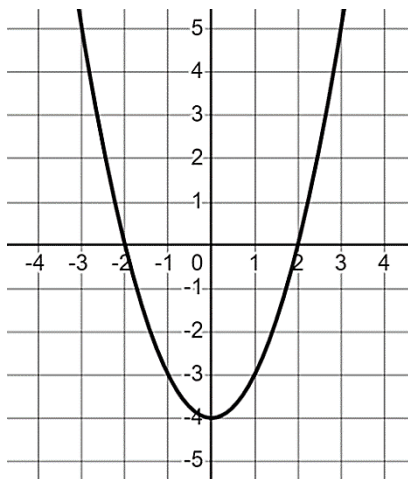
d)



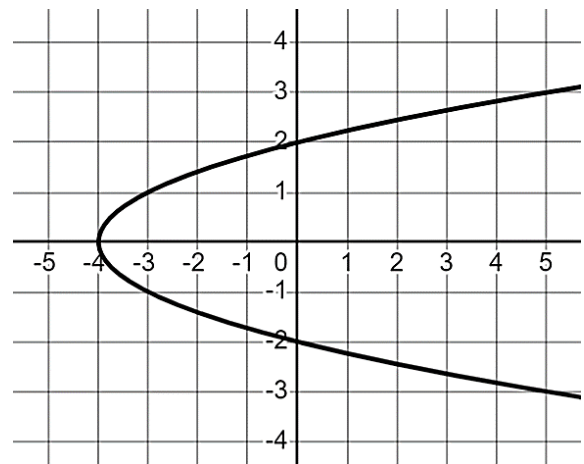
e) $(-3, 5), (0, 6), (-3, 8), (12, 27)$

f) $(-8, 12), (0, 8), (0, 14), (8, 16)$

g)

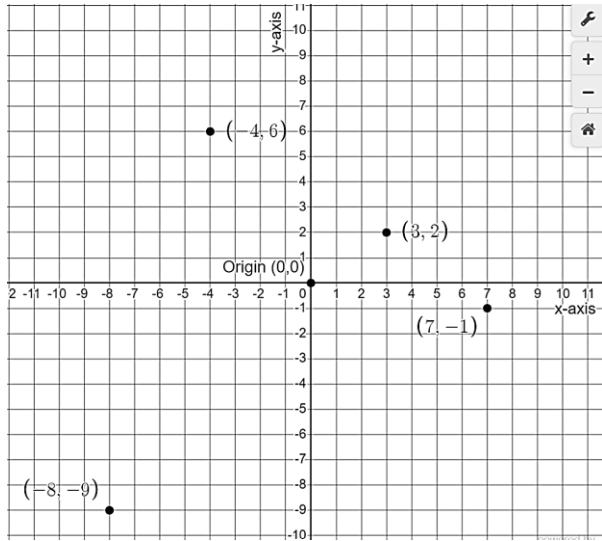


h)



Answer Key

1.



2.

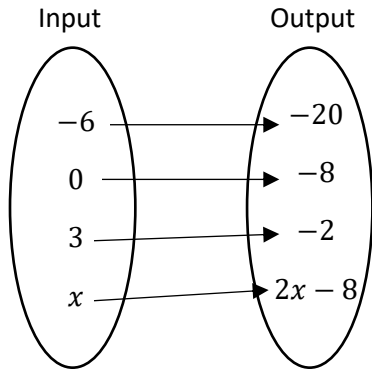
Input	Output
-4	-7
0	5
8	29
x	$3x + 5$

3.

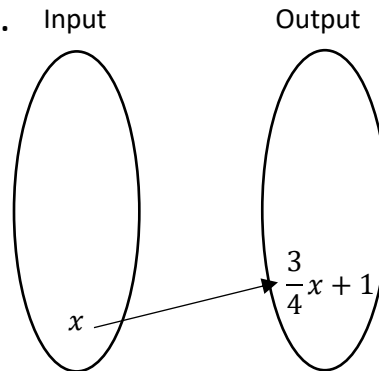
Input	Output
x	$-\frac{1}{2}x - 4$

Answers vary depending on chosen inputs

4.



5.



Answers vary depending on chosen inputs

6. $(-3, -24), (0, 0), (-5, -40), (7, 56)$

7. Answers vary depending on chosen inputs

8.

- a. Function
- c. Relation
- e. Relation
- g. Function

- b. Relation
- d. Function
- f. Relation
- h. Relation