

Practice Problems 1.3

Identify the domain and range of the function.

1)

Input	Output
0	5
1	7
2	15
3	44

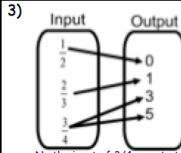
$D = \{0, 1, 2, 3\}$
 $R = \{5, 7, 15, 44\}$

2)

Input	Output
6	5
12	7
21	10
42	17

$D = \{6, 12, 21, 42\}$
 $R = \{5, 7, 10, 17\}$

Tell whether the pairing is a function.



No the input of 3/4 goes to two different outputs.

4)

Input	Output
-3	6
0	6
2	6
4	6

Yes, every input goes to only one output, even though it is the same output

5)

Input	Output
-5	5
4	7
-5	15
2	44

No, the input, -5, goes to two different outputs.

Describe and correct the error related to the function represented by the table.

6)

Input, x	1	2	3	4	5
Output, y	6	7	8	6	9

The pairing is not a function. One output is paired with two inputs.

The pairing IS a function. Each input has only 1 output.

7) Draw a mapping diagram for a function with 6 inputs. Then make a table to represent the function.



x	1	2	3	4	5	6
y	0	0	0	0	0	0

8) MULTIPLE CHOICE: Each output of a function is .5 less than the corresponding input. Which equation is a rule for the function?

- a) $y = x - 0.5$ b) $y = x + 0.5$ c) $y = 0.5 - x$ d) $y = 0.5x$

Make a table for the function. Identify the range of the function.

9) $y = x + 3.5$
 Domain: 12, 15, 22, 30

x	y
12	15.5
15	18.5
22	25.5
30	33.5

$R = \{15.5, 18.5, 25.5, 33.5\}$

10) $y = \frac{1}{2}x + 3$

Domain: 4, 6, 9, 11

x	y
4	5
6	6
9	7.5
11	8.5

$R = \{5, 6, 7.5, 8.5\}$

11) $y = \frac{0.5x + 1}{2}$

Domain: 0, 2, 4, 6

x	y
0	0.5
2	1
4	1.5
6	2

$R = \{0.5, 1, 1.5, 2\}$

12) Write a rule for the function:

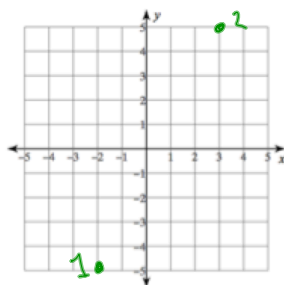
Input, x	15	20	21	30	42
Output, y	7	12	13	22	34

$y = x - 8$

Skillz Review

Plot the points:

- 1) (-2, 5) 2) (3, 5)



Simplify:

3) $\frac{8 - (-6)}{25 - 4}$

$= \frac{8 + 6}{21} = \frac{14}{21}$
 $= \frac{2}{3}$

Simplify:

4) $-(2)^3 - 4(3)$

$-(8) - 12$
 $-8 - 12$
 -20