Name: _____ Date: _____

1. Determine if the values shown in the table below represent a function. Explain why or why not.

| Input (x)	1	3	5	7	9
Output (y)	5	11	15	18	30

2. Determine if the values shown in the table below represent a function. Explain why or why not.

Input (x)	$\dfrac{3}{4}$	6	7	12	12
Output (y)	2	19	9	18	42

3. The table below represents the number of minutes Norah spends reading each day. Does the data shown in the table below represent a function? Explain why or why not.

Day (x)	1	2	3	4	5	6	7
Time in minutes (y)	60	82	45	0	90	60	0

4. Apply the rule below to each input in the table. Then explain why the table represents a function.

Input → Divide by 2, add 10 → Output
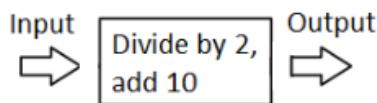
Input	0	2	4	6	8	10
Output						

5. Which of the following tables does **not** represent a function?

A.

x	y
5	7
4	6
3	7
2	4

B.

x	y
0	0
1	1
2	2
3	3

C.

x	y
5	3
10	3
15	3
20	3

D.

x	y
5	7
5	8
5	9
5	10

6. Izak was worried that his cat was eating too many treats. He kept track of how many treats hit cat ate per day and made a bar graph to look at the data.
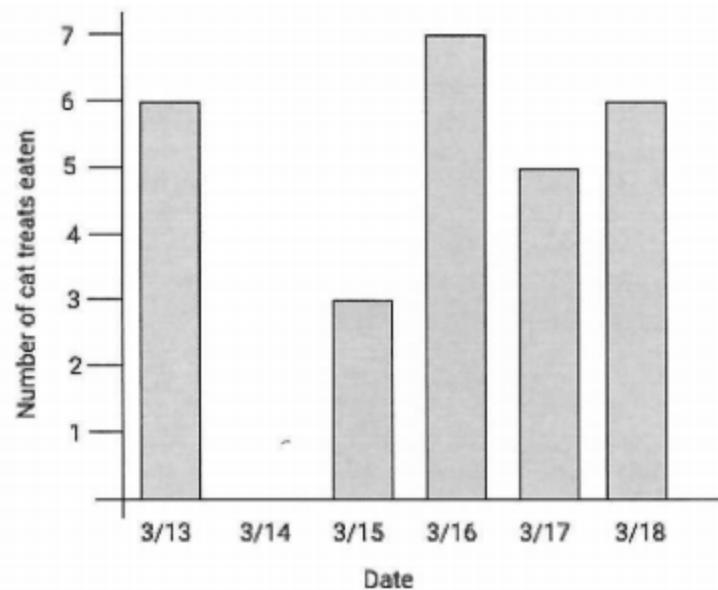
a. Fill in the table below with information from the graph.

Date	Number of cat treats eaten

b. Is the number of cat treats eaten a function of the date? Explain why or why not.

7. Molly and Daylon both created tables to represent functions. Did both students create a function? Explain why or why not for each student.

Molly's Table:

Input (x)	1	2	3	4	5	6	7	8
Output (y)	7	11	25	10	11	36	127	1

Daylon's Table:

Input (x)	-10	-12	-8	-5	-1	-8	0	17
Output (y)	-7	18	-54	12	42	78	105	68

8. Here is an input-output rule:

Input ⇨ | if the input is negative, write a 0; if the input is positive, write a 1 | Output ⇨
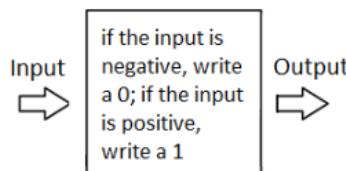
a. Complete the table for the input-output rule:

Input	-3	3	-2	2	-1	1	0
Output							

b. Determine if this represents a function and explain why or why not.

9. These tables correspond to inputs and outputs. Which of these input and output tables represent a relationship that is **not** a function? Select **all** that apply.

A.

input	output
-2	6
-1	3
0	0
1	3
2	6

B.

input	output
4	-2
1	-1
0	0
1	1
4	2

C.

input	output
1	0
2	0
3	0
4	0
5	0

D.

input	output
3	1
3	2
3	3
3	4
3	5

E.

input	output
1	1
2	2
3	3
4	4
5	5

F.

input	output
8	5
6	5
4	2
2	1
0	0

10. Imagine another student in class is absent today.

    a. Write a brief explanation for this student about why the table below is a function.

Input (x)	-3	-2	-1	0	1	2	3
Output (y)	9	4	1	0	1	4	9

    b. Write a brief explanation for this student about why the table below is not a function.

Input (x)	-3	-2	-1	0	-1	-2	-3
Output (y)	-27	-8	-1	0	1	8	27