Name _____ Date _____

Function Tables

Fill in the missing values in the function tables below. Choose your own input for the blank row. Then find the output. Find or check the rule in the last row. Describe the rule in words below each table.

1.

Input	Output
12	7
11	
	5
9	
	3
	2
6	
	0
N	$N - 5$

Rule:

2.

Input	Output
1	5
2	15
3	25
4	35
	55
15	
	205
100	
N	$10 \times N - 5$

Rule:

3. Study the table to the right. John says the rule cannot be $N + 4$ or the input plus 4. Do you agree with John? Why or why not?

If not, what is the rule?

Input	Output
2	6
3	9
10	30
N	$N + 4$

Rule:

Name _____ Date _____

4.

Input	Output
1	5
2	10
3	15
4	
	25
10	
	500
N	

Rule:

5.

Input	Output
1	7
2	12
3	17
4	
	27
10	
	502
N	

Rule:

6.

Input	Output
2	8
4	16
5	20
	40
20	
	100
N	

Rule:

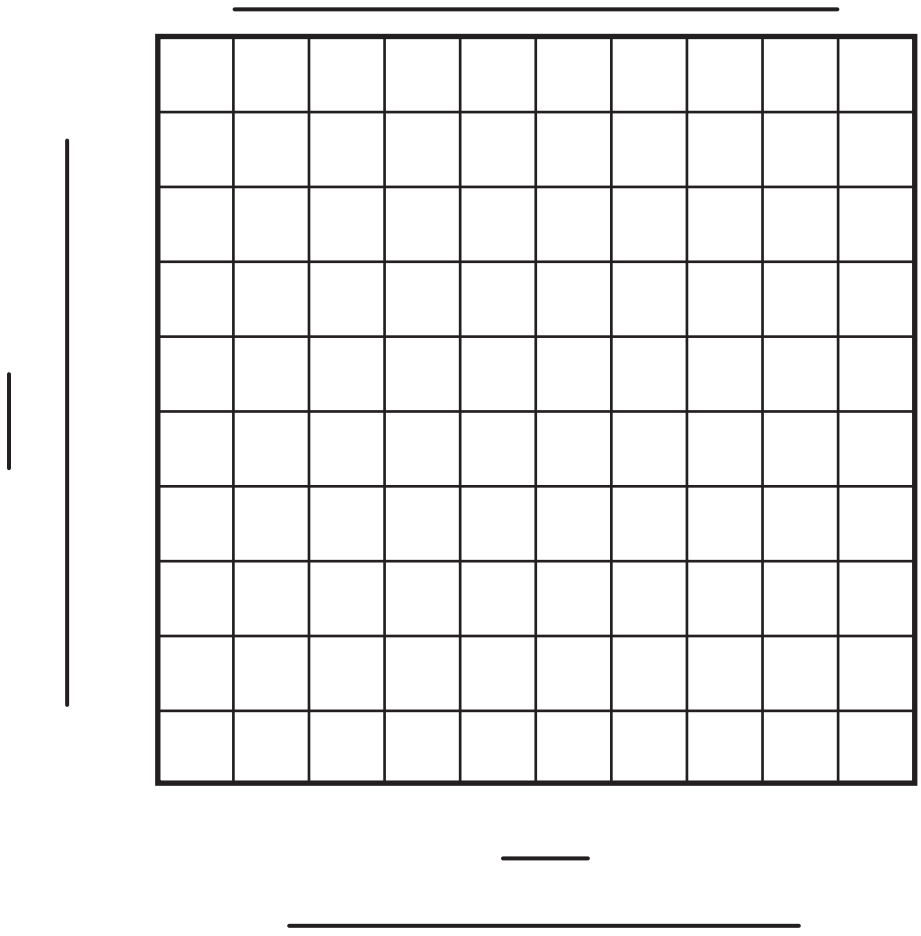
7.

Input	Output
2	6
4	14
5	18
10	38
20	
	98
100	
N	

Rule:

Name _____ Date _____

8. Graph the data in Question 6. Describe the pattern in the graph.



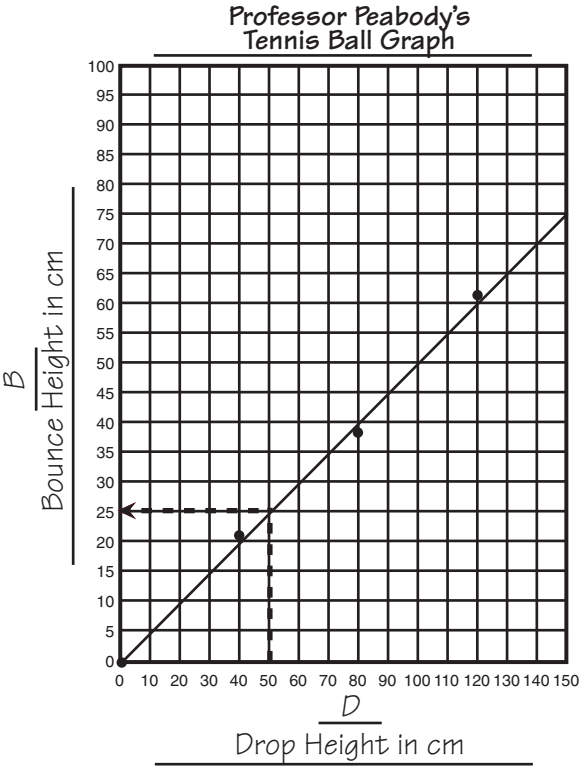
Play the *Guess My Rule* game in the *Student Guide* with a partner.

Name _____ Date _____

9. Professor Peabody collected the following data for a tennis ball in a Bouncing Ball Experiment. He did three trials and found the mean. Then he graphed his data.

Professor Peabody's Tennis Ball

D Drop Height (in cm)	*B* Bounce Height (in cm)			
	Trial 1	Trial 2	Trial 3	Mean
40	21	20	22	21
80	39	38	40	39
120	61	65	60	62



A. Complete the function table using Professor Peabody's Drop Heights for input and Bounce Heights for output. Use the graph.

B. Look for a pattern in the data. Describe the pattern in words.

C. Use your pattern to predict the bounce height when the drop height is 200 cm (*D* = 200 cm).

Input	Output
D **Drop Height (in cm)**	***B*** **Bounce Height (in cm)**
50	
100	
	75
D	

D. Show the pattern in symbols in the last line of the table.