

Day 3 – Creating Function Rules**Name:** _____**Practice Assignment****Date:** _____ **Block:** _____

1. Complete the input-output table. Then write the function rule.

In	3	4	5	7	10
Out	7	8	9		

In	5	6	8	10	15
Out	14	15	17		

2. Create a function rule to describe the table below.

x (in)	2	9	14	17
y (out)	0	7	12	15

3. Elaine is in the business of repairing home computers. She charges a base fee of \$45 for each visit and \$25 per hour for her labor.

a. What are the independent and dependent quantities and variables?

b. Write a function rule that represents the total cost $c(x)$ for one home visit and x hours of labor.

4. A mail order company charges \$5 to place an order and then \$2 per item in the order, up to a maximum of 4 items.

a. Write a function rule relating the total cost and number of items ordered.

b. What is a reasonable domain for this situation?

5. A rental car owner charges a \$25 fee to rent a car and \$0.20 per mile driven.

a. Write a function rule relating the total cost and the number of miles driven.

b. Find the value of $F(121)$. Explain what it means in terms of the problem scenario.

c. How many miles did a customer drive if his total bill was \$215.00?

6. Fiona has a long distance cell phone plan with AT&T. The cost of a long-distance cell phone call is \$0.50 to make a phone call and \$0.10 for each minute that Fiona talks. If x is the number of minutes that Fiona talks on her cell phone and y is the total dollar cost of the phone call, then y is a function of x . Let's name this function C , for cost function.

- What are the independent and dependent variables in this scenario?
- Make a table of values to record the costs of a call that lasts 1, 2, 3, 4, 5, and 6 minutes.

x (minutes)	1	2	3	4	5	6
$C(x)$ (cost)						

- Write a formula showing how the cost of a long distance call depends on the number of minutes that Fiona talks on her cell phone. (Assume that the company does NOT round up to the nearest minute).
- What is $C(2)$? What does it mean? Explain how you can use the table and the formula to compute $C(2)$.
- What is $C(x) = \$1.00$? Explain how you can use the table and formula to compute $C(x) = \$1.00$.

7. The Martin family is comparing the costs of two different cable companies. Direct TV charges a \$100 setup fee and \$50 per month. Comcast charges a \$45 setup fee and \$60 per month.

- Write the function rule for DirectTV.
- Write the function rule for Comcast.
- Decide which company is cheaper after 12 months.