Practice 5-4

Writing a Function Rule

Write a function rule for each table.

1. \[
\begin{array}{c|c}
 x & f(x) \\
--- & --- \\
0 & 3 \\
2 & 5 \\
4 & 7 \\
6 & 9 \\
\end{array}
\]

2. \[
\begin{array}{c|c}
 x & f(x) \\
--- & --- \\
0 & 0 \\
1 & 3 \\
3 & 9 \\
5 & 15 \\
\end{array}
\]

3. \[
\begin{array}{c|c}
 x & f(x) \\
--- & --- \\
5 & 0 \\
10 & 5 \\
15 & 10 \\
20 & 15 \\
\end{array}
\]

4. a. Write a function rule to calculate the cost of buying bananas at $0.39 a pound.
   b. How much would it cost to buy 3.5 pounds of bananas?

5. To rent a cabin, a resort charges $50 plus $10 per person.
   a. Write a function rule to calculate the total cost of renting the cabin.
   b. Use your rule to find the total cost for six people to stay in the cabin.

Write a function rule for each table.

6. \[
\begin{array}{c|c}
 x & f(x) \\
--- & --- \\
-4 & -2 \\
-2 & -1 \\
6 & 3 \\
8 & 4 \\
\end{array}
\]

7. \[
\begin{array}{c|c}
 x & f(x) \\
--- & --- \\
-3 & 9 \\
0 & 0 \\
1 & 1 \\
5 & 25 \\
\end{array}
\]

8. \[
\begin{array}{c|c}
 x & f(x) \\
--- & --- \\
0 & 20 \\
2 & 18 \\
4 & 16 \\
8 & 12 \\
\end{array}
\]

9. Pens are shipped to the office supply store in boxes of 12 each.
   a. Write a function rule to calculate the total number of pens when you know the number of boxes.
   b. Calculate the total number of pens in 16 boxes.

10. a. Write a function rule to determine the change you would get from a $20 bill when purchasing items that cost $1.25 each.
    b. Calculate the change when five of these items are purchased.
    c. Can you purchase 17 of these items with a $20 bill?

11. You invest $209 to buy shirts and then sell them for $9.50 each.
    a. Write a function rule to determine your profit.
    b. Use your rule to find your profit after selling 24 shirts.
    c. How many shirts do you need to sell to get back your investment?