Name _____ Class _____ Date _____

Reteaching 4-4

Writing a Function Rule

OBJECTIVE: Writing rules for functions from tables and words

MATERIALS: None

You can write a rule for a function by analyzing a table of values. Look for a pattern in the data table. For each row, ask yourself, "What can I do to the first number to get the second number?" Write the patterns. Circle the pattern that works for all of the data in the table. This is the rule for the function.

Example

x	*f(x)*	
1	3	← **Add 2 or multiply by 3.**
2	4	← **Add 2 or multiply by 2.**
3	5	← **Add 2.**

A rule for the function is $f(x)$ equals x plus 2. The statement can be written as $f(x) = x + 2$.

Exercises

Analyze each table and then write a function rule.

1.

x	*f(x)*
0	0
1	3
2	6
3	9

2.

x	*f(x)*
0	−1
1	0
2	1
3	2

3.

x	*f(x)*
0	0
−1	1
3	9
5	25

Write a function rule for each situation.

4. the length $\ell(w)$ of a box that is two more than four times the width w.

5. the width $w(\ell)$ of a sheet of plywood that is one half the length ℓ.

6. the cost $c(a)$ of a pounds of apples at \$.99 per pound

7. the distance $d(t)$ traveled at 65 miles per hour in t hours

8. the value $v(q)$ of a pile of q quarters

9. a worker's earnings $e(n)$ for n hours of work when the worker's hourly wage is \$8.25

10. the distance $f(d)$ traveled in feet when you know the distance d in yards

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