8 Algebra CC

Essential Questions: What is function notation? How do we evaluate functions using function notation?

Do Now: Let's Review!



Determine if the relations displayed by the tables below are functions. Be ready to justify your response.

x	у
-3	9
0	0
1	1
3	9

Х	у
1	5
2	5
3	5
4	5

х	у
3	4
2	1
3	0
5	8

Representing Functions Using Function Notation

Function Notation, y = f(x), is a way to write a rule that relates the domain and range of a function.

For example: **y** = 2**x** + 3 written in function notation is ____

Input x	Function Rule <i>f</i> (x) = 2x + 3	Output <i>f</i> (x)	Ordered Pairs (x, f(x))
-2			
4			
7			

What is the purpose of function notation?

- 1) Explain the rule-Given function f defined by the rule f(x) = 2x + 3
- 2) Specify an output, *f*(x), for a given input x
- 3) Remember that **y** is the same as $f(x) \rightarrow [y = f(x)]$.



Evaluating Functions written in Function Notation

For each of the polynomial functions, find the outputs for the given inputs.

3) Given the function
$$f(x) = \frac{x}{3} + 7$$
,

a) Find *f*(-9)

b) Find x if f(x) = 13



Functions can be represented by equations in two variables or by using
notation.
It is important to remember that when using function notation, y "is the same as"

IT'S YOUR TURN NOW

1. Given the function f defined by f(x) = 2x + 1, find the following:

Using the same function, find the value of x when f(x) = 10.

2. Evaluate the function $p(x) = x^2 - 3$ when x = -2.

3. Find the value of x when h(x) = -25 in the function h(x) = -7x + 10.