Math 3 2.1 Features of Functions Unit 2

*EQ: What is a function? How do we state the domain, range, and intervals in/decreasing?*

**Relation:**

**Function:**

**Domain:**

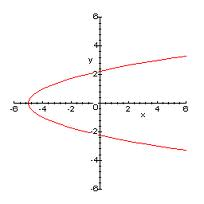
**Range:**

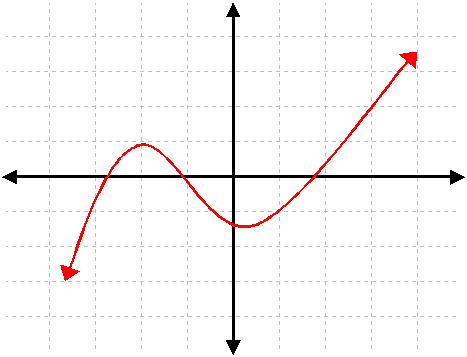
**Determining if a Set of Ordered Pairs is a Function**

**Example 1:**  What are the domain and range of this relation? {(-4, 0), (-3, 1), (0, -2), (1, 2), (3, 3)}

**Domain: Range: Is this a function?**

**Determining if a Graph is a Function**

**Example 1:** Are the following functions? Explain why or why not.

1. 

**Determining if an Equation is a Function**

Two things cannot be true:

1. y cannot be in absolute value bars
2. y cannot be raised to an even power

**Example 2:** State whether the following equations are functions:

1. y = x2 + 2 b. x = y2 – 3y c. y = 3x

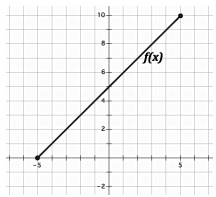
**Constant, Increasing, and Decreasing Intervals**

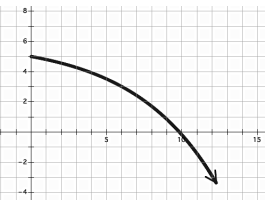
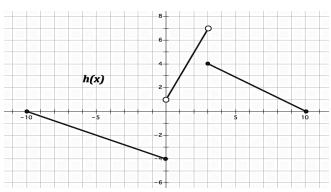
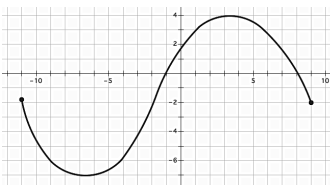
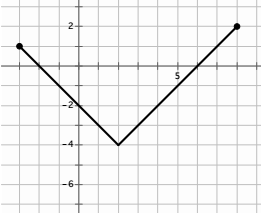
**Intervals Increasing:**

**Intervals Decreasing:**

**Constant Intervals:**

**Example 3:** Given each representation of a function, determine the domain and range. Then, determine the intervals in which the function is increasing, decreasing, and/or constant.

1. 

1. 
2. 
3. 
4. 
5. 