2-1 Relations and Functions Notes
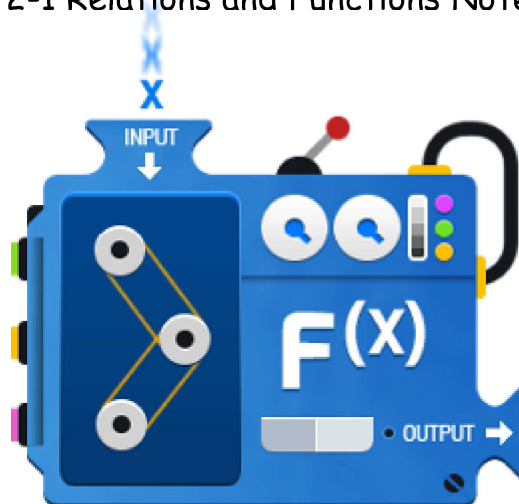
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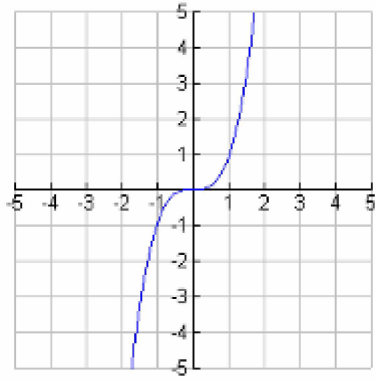
A. A <u>relation</u> is a set of ordered pairs (x, y).

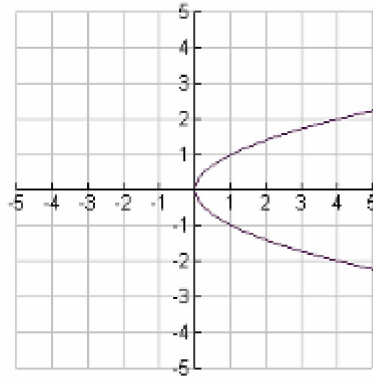Associations:

x	y

B. <u>Function</u> – For every input, there is exactly one unique output.
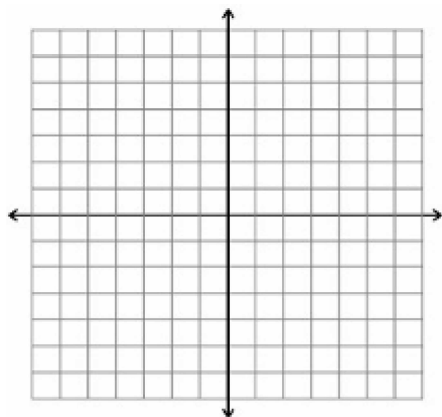
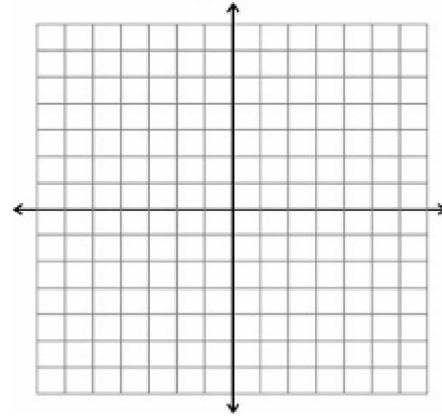| Function	Not a Function

Your turn...

Function

Not a Function

Do you suppose there is a "rule of thumb" to remember this?

<u>Vertical Line Test</u> – If every vertical line intersects the graph in at most one place, then the relation is a function.

<u>Ordered Pairs (x, y)</u>
1. (1, 3), (4, -3), (-3, 2), (-1, -2)   Function
2. (1, 3), (4, -3), (-3, 2), (1, -2) Not a Function

Why?

Your turn...

Ordered Pairs (x, y)
1. (,), (,), (,), (,) Function
2. (,), (,), (,), (,) Not a Function

C. Evaluating

Suppose $f(x) = 2x + 4$, $g(x) = -x + 5$, and $h(x) = x^2 + 2x - 2$ to evaluate the following.

1. $f(-3)$

Answer

Suppose $f(x) = 2x + 4$, $g(x) = -x + 5$, and $h(x) = x^2 + 2x - 2$ to evaluate the following.

2. $g(-3) - h(1)$

Answer

Suppose $f(x) = 2x + 4$, $g(x) = -x + 5$, and $h(x) = x^2 + 2x - 2$ to evaluate the following.

3. $-4h(x)$

Answer

Suppose $f(x) = 2x + 4$, $g(x) = -x + 5$, and $h(x) = x^2 + 2x - 2$ to evaluate the following.

4. $\dfrac{f(4)}{g(2)}$

Answer

Suppose $f(x) = 2x + 4$, $g(x) = -x + 5$, and $h(x) = x^2 + 2x - 2$ to evaluate the following.

5. $g(-2) - h(x + 1) =$

Answer

Do you understand?

Yes or No

Yes   No