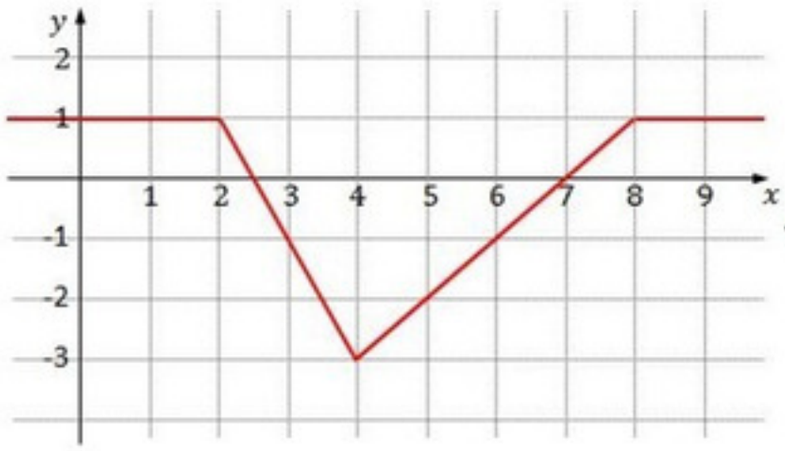
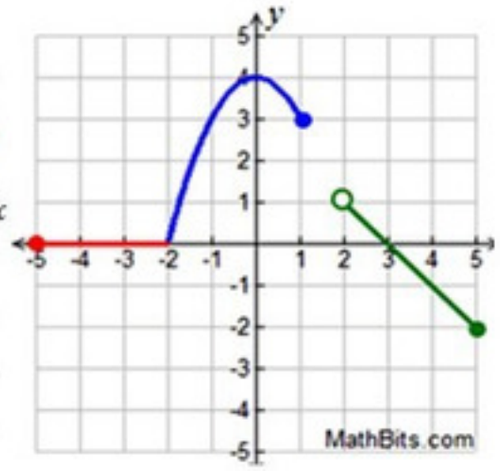
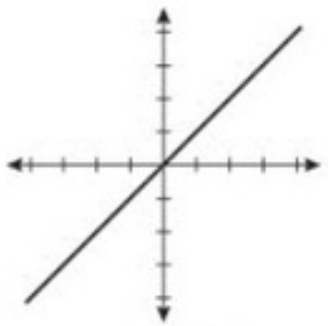
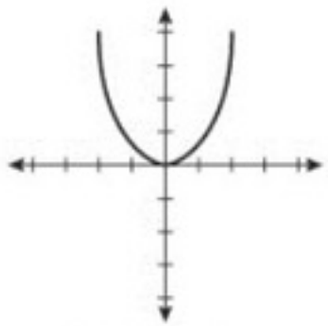
Functions



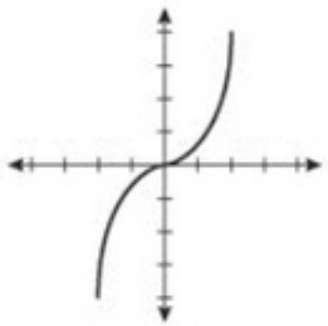




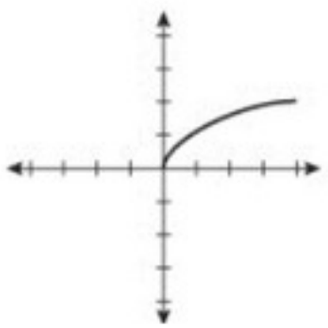
$y = f(x) = x$

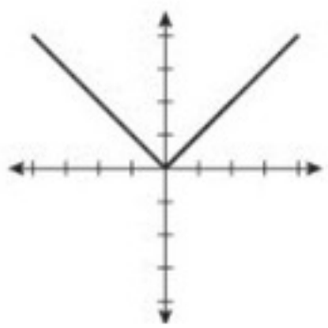


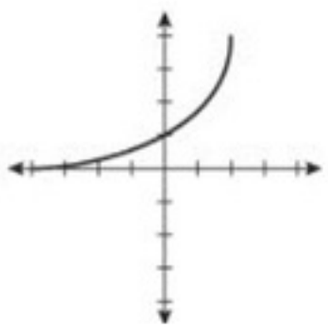
$y = f(x) = x^2$



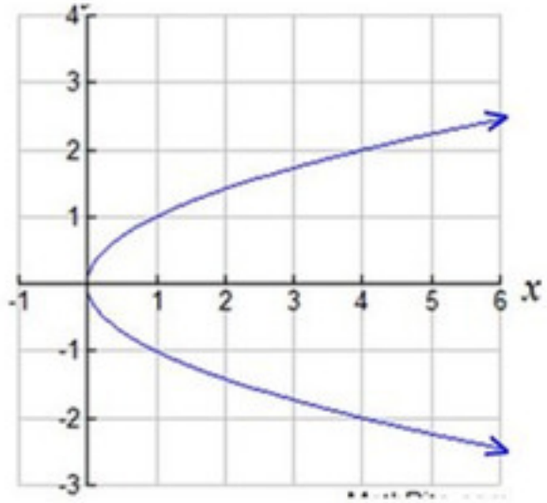
$y = f(x) = x^3$

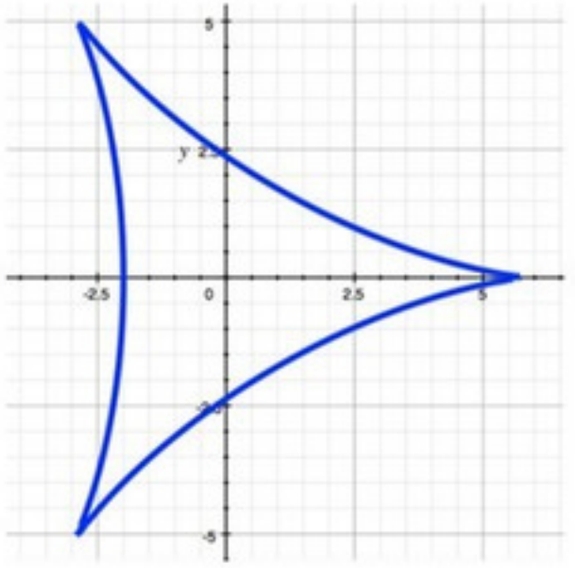


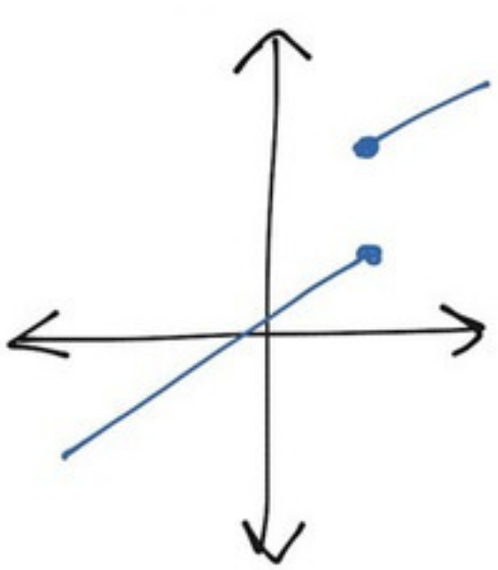




Non-Functions (Relations)





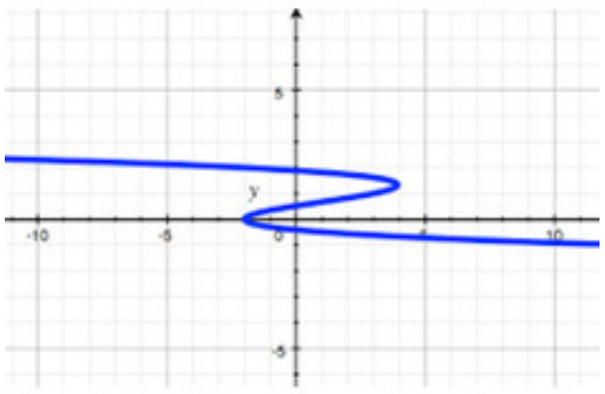


Open Ended Question

How can you tell if a graph is a function?

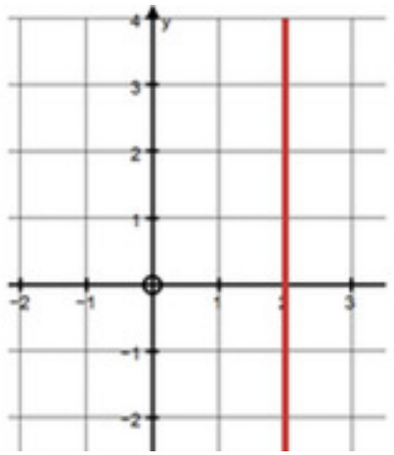
Please enter your answer here.

Quiz



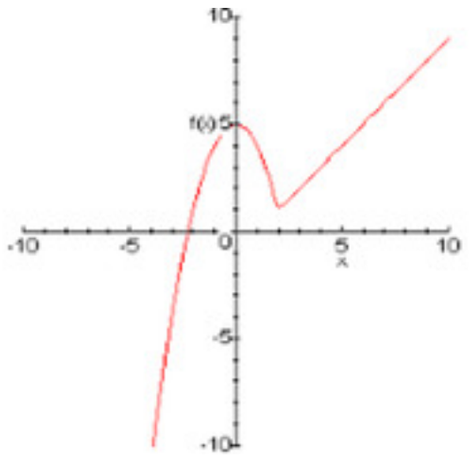
Determine if the following graph is a function or not a function.

- Function
- Not a function



Determine if the following graph is a function or not a function.

- Function
- Not a function

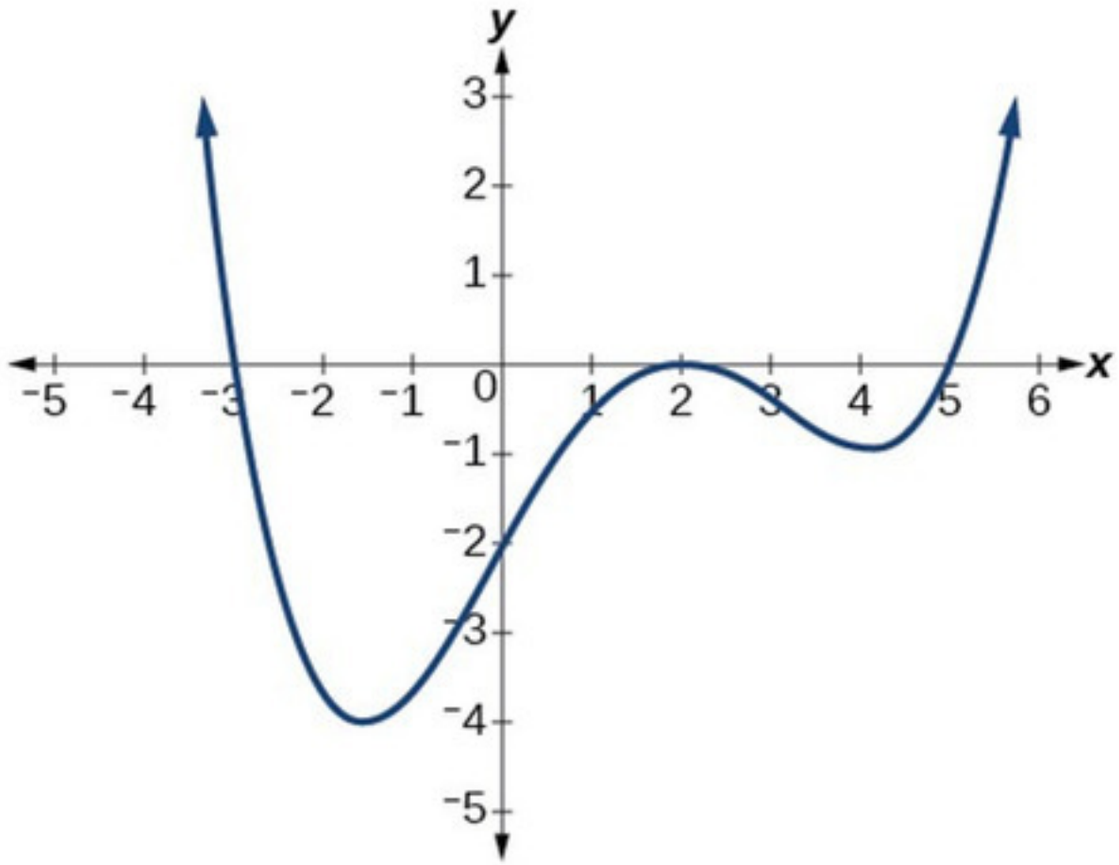


Determine if the following graph is a function or not a function

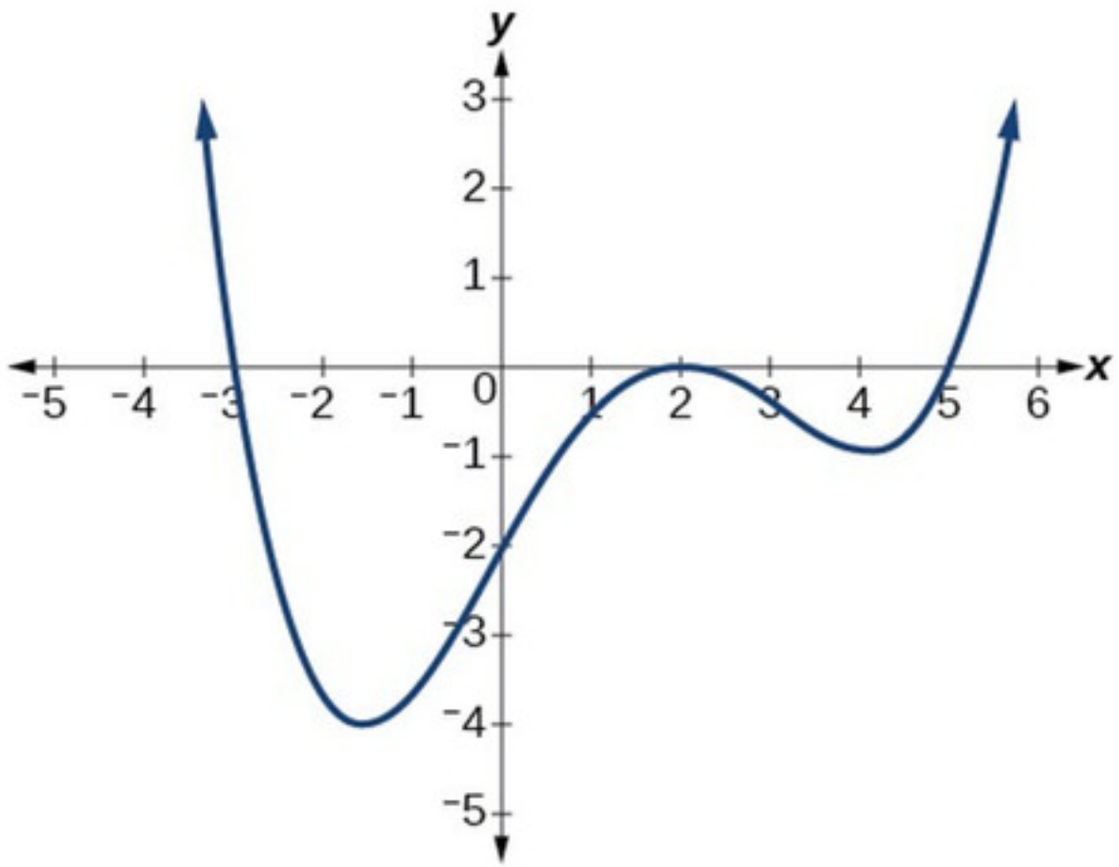
- Function
- Not a function

Draw It

Find the x- and y-intercepts of the graph.



Find the x- and y-intercepts of the graph.



When listing out x-intercepts, "in order" means the most negative x-intercept first to the most positive x-intercept last.

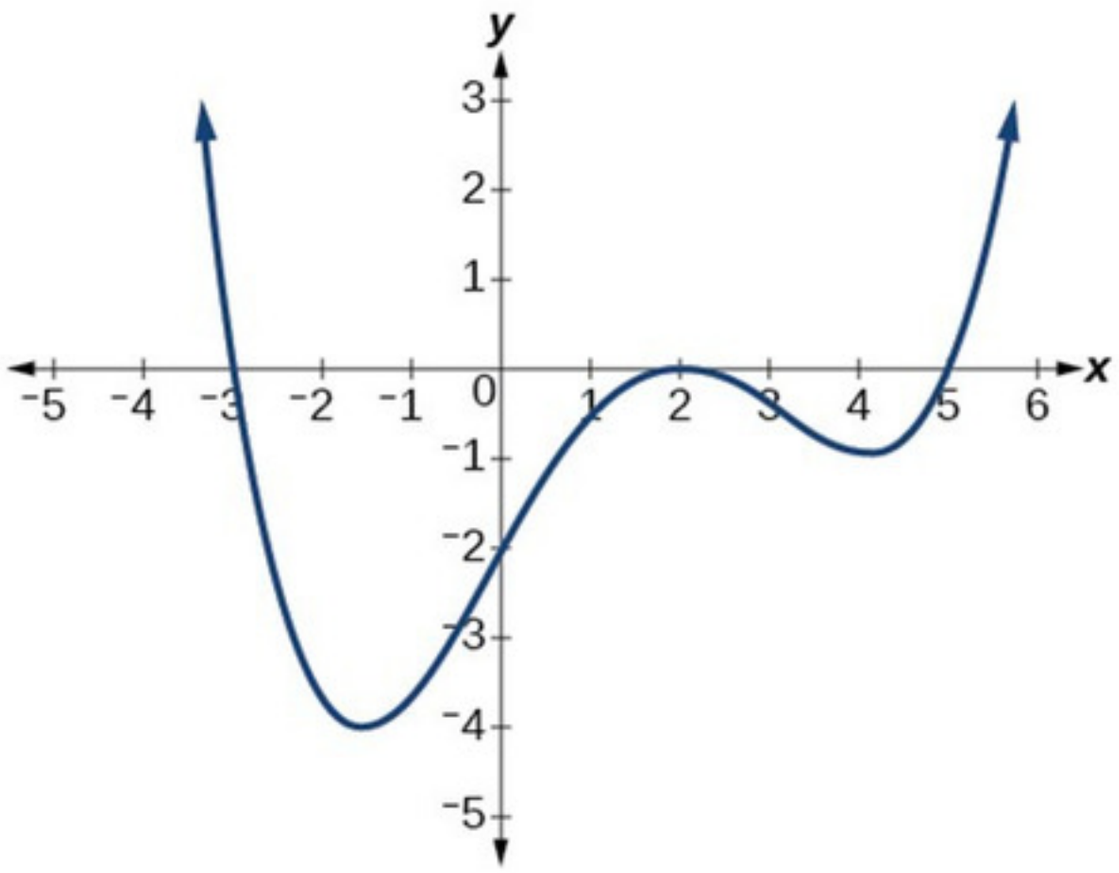
$(-3,0)$ $(2,0)$ $(5,0)$

x-intercepts: where the graph touches the x-axis.

y-intercept: $(0,-2)$

y-intercept: where the graph touches the y-axis.

Finding Domain and Range

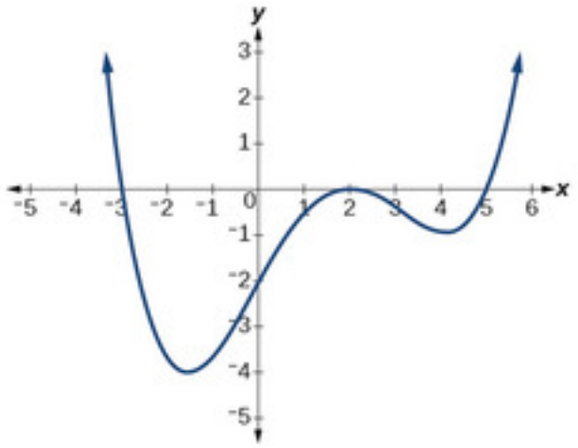


Domain: The set of all x-values a function is defined. (How far to the left does the graph go? How far to the right does the graph go? Are there any open circles/gaps I need to skip?)

Range: The set of all y-values a function is defined. (How far down does the graph go? How far up does the graph go? Are there any open circles/gaps I need to skip?)

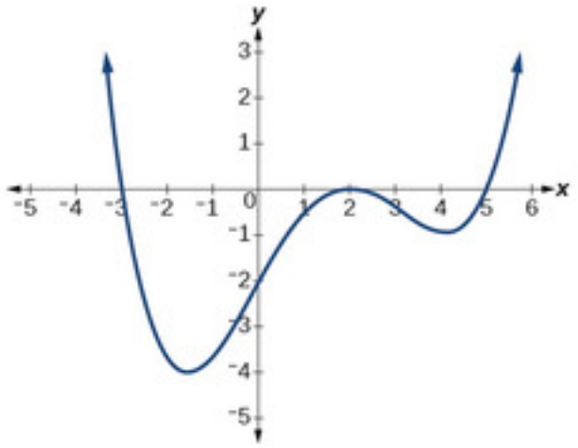
Square brackets [ ] INCLUDE the point
Parenthesis ( ) EXCLUDE the point

Quiz



Find the domain of the function. (Click on the picture to make it bigger!)

- (-∞,∞)
- [-4, ∞)
- [-4, 6]
- [-3.5, 5.5]

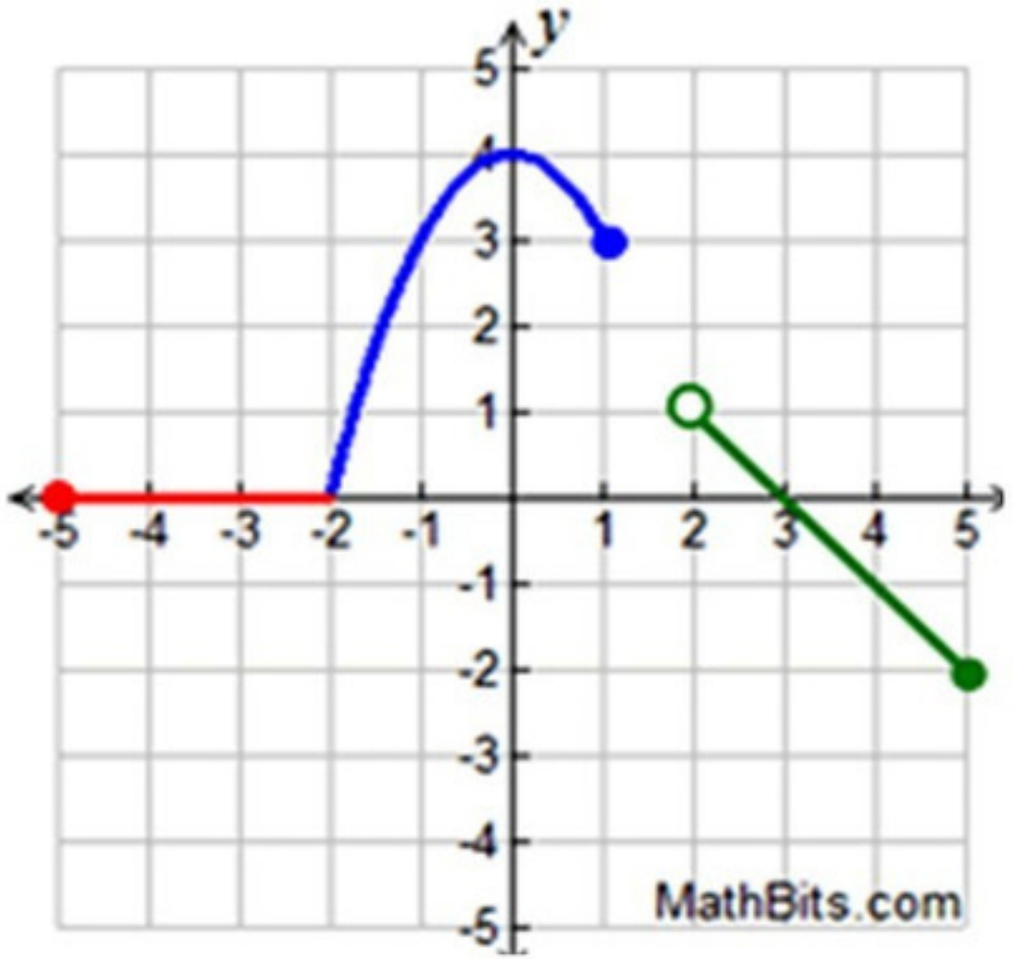


Find the range of the function. (Click on the picture to make it bigger!)

- (-∞,∞)
- [-2, ∞)
- [-4, ∞)
- [-4, 6]

Draw It

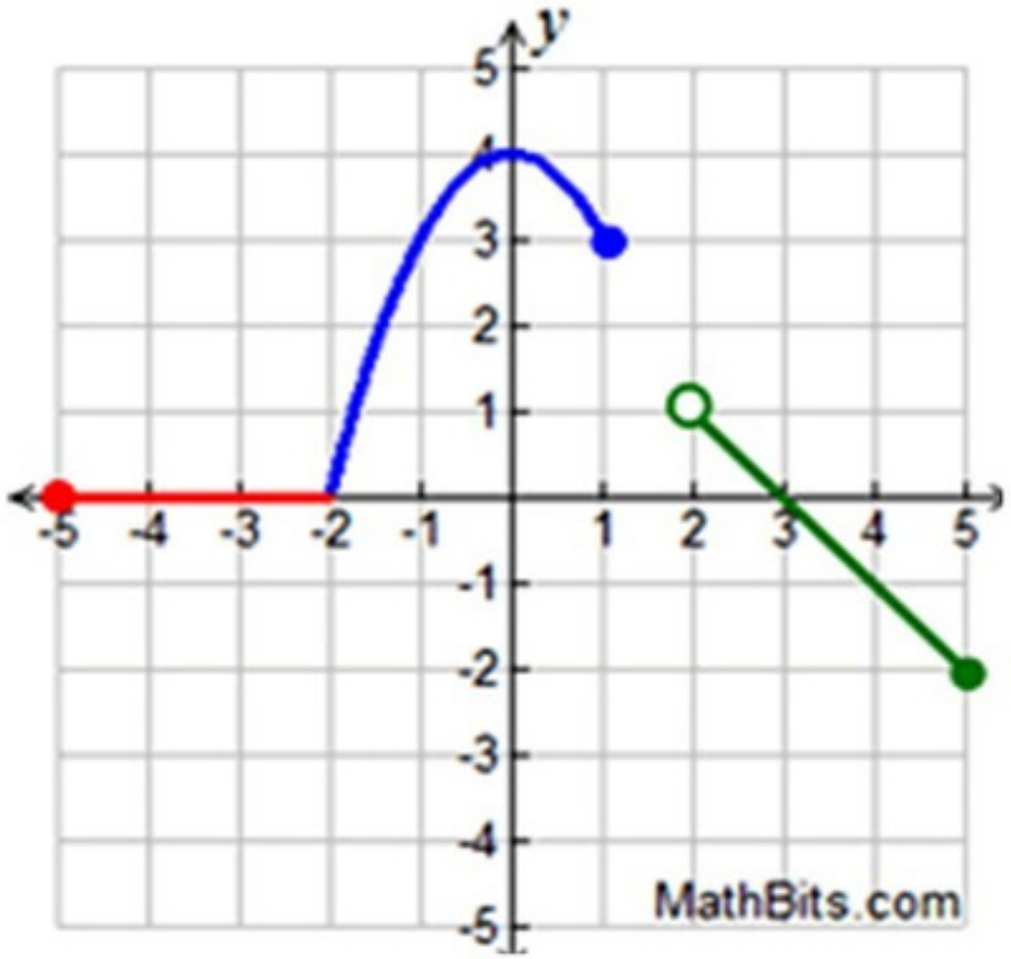
Finding Domain and Range



Domain:

Range:

Increasing, Decreasing, and Constant Intervals



Increasing: Tracing the graph from left to right, where is the graph going up?

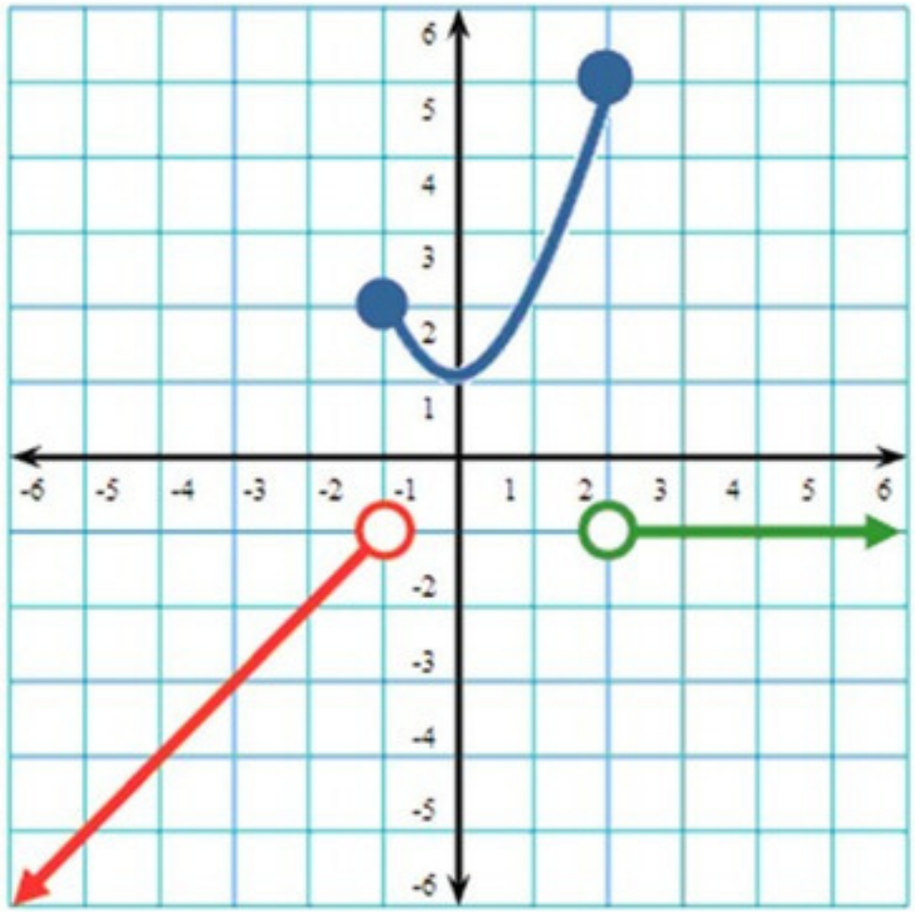
Decreasing: Tracing the graph from left to right, where is the graph going down?

Constant: Tracing the graph from left to right, where is the graph staying flat?

Note: Increasing, decreasing, and constant intervals are ALWAYS the x-values!
If you put all 3 together, you end up with the domain, actually...

Draw It

Increasing, Decreasing, and Constant Intervals



Increasing:

Decreasing:

Constant: