

Objective: Analyzing key features of a graph.

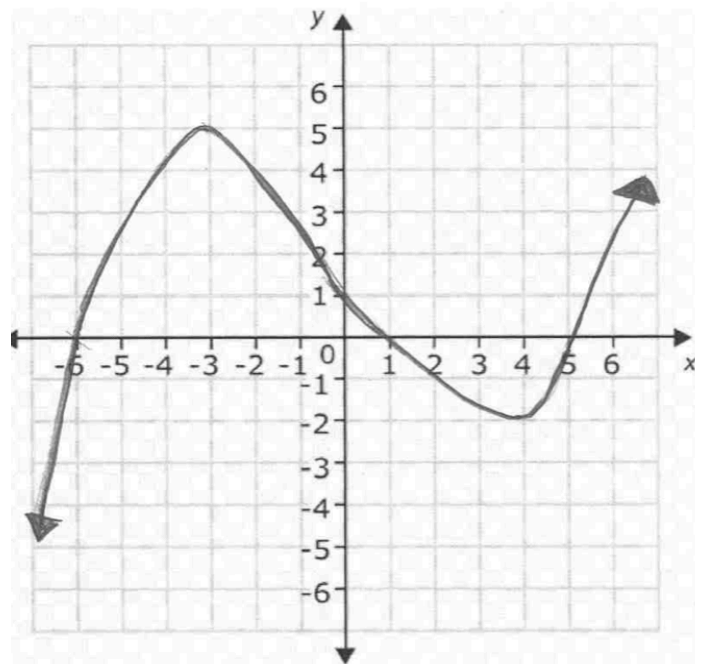
A function can be described in many ways! Functions can be described by their behavior, specific regions and by specific locations.

Part I: Key Locations of a Function

Locations are listed as **ordered pairs**

| | |
|-----------------------------|-----------------------------|
| <u>Relative Minimum(s):</u> | <u>Relative Maximum(s):</u> |
| <u>Absolute Minimum:</u> | <u>Absolute Maximum:</u> |
| <u>X-intercept(s):</u> | <u>Y-intercept(s):</u> |

Label & List the Key Locations of the Function Provided!

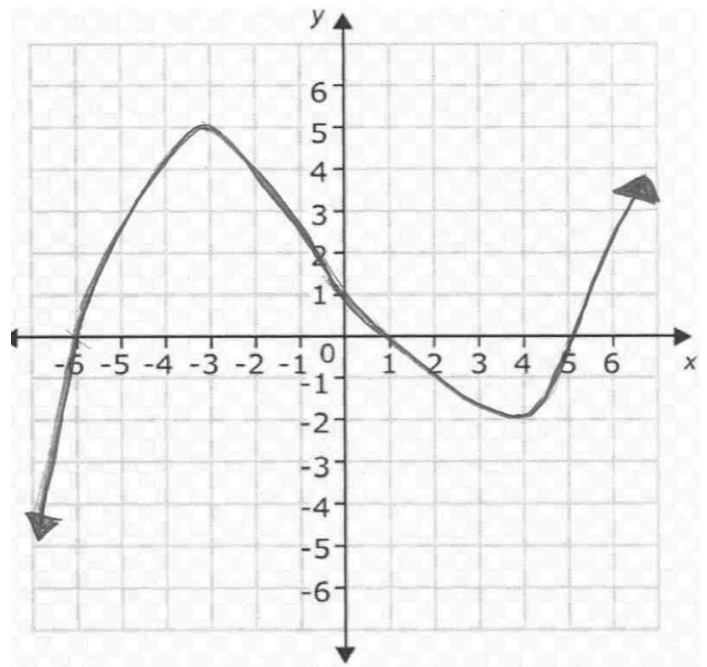


Part II: Key Regions of a Function

Regions are listed as **inequalities** or **intervals**

| | |
|--------------------------------|--------------------------------|
| <u>Increasing Interval(s):</u> | <u>Decreasing Interval(s):</u> |
| <u>Constant Interval(s):</u> | <u>Domain:</u> |
| <u>Range:</u> | |

Label & List the Key Regions of the Function Provided!

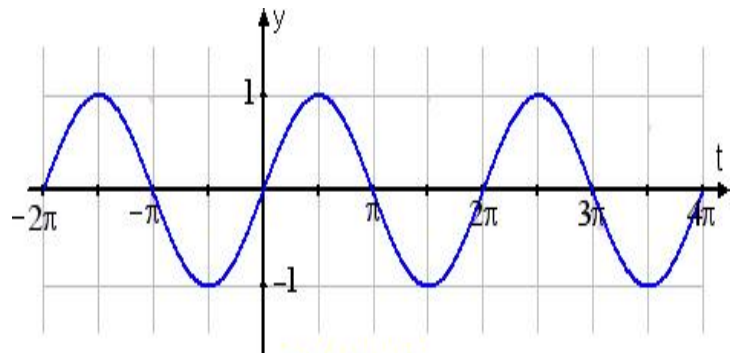
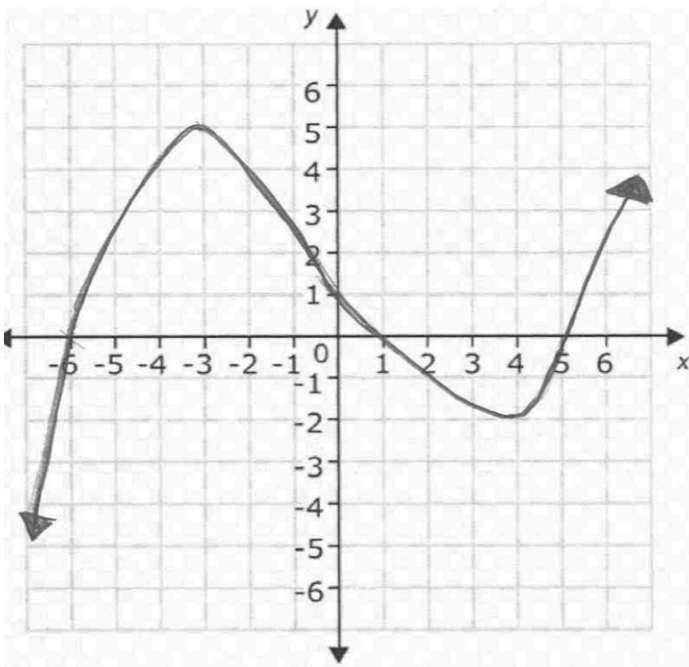


Part III: Key Behaviors of a Function

Behaviors are listed with vocabulary & proper notation

| | |
|----------------------|------------------|
| <u>End behavior:</u> | <u>Symmetry:</u> |
| <u>Periodicity:</u> | |

Label & List the Key Behaviors of the Function Provided!



Example 1: Determine the key features of the following graphs. If it is not present write “not applicable”.

A.)

x-intercept(s):

y-intercept(s):

Domain:

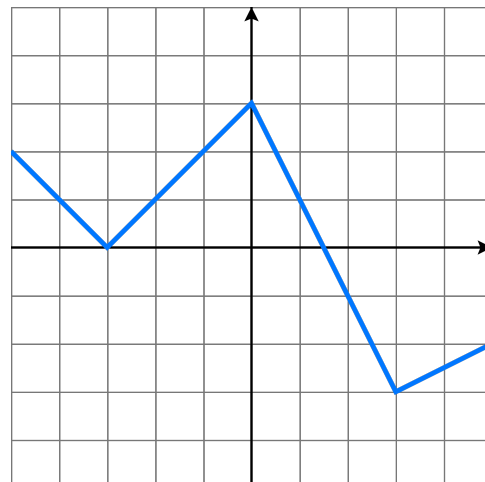
Range:

Increasing Intervals:

Decreasing Intervals:

Constant Intervals:

Max/ Min (label relative or absolute):



Symmetric (circle one)? **Yes** **or** **No**

End behavior

$x \rightarrow +\infty, y \rightarrow$

$x \rightarrow -\infty, y \rightarrow$

Periodic (circle one)? **Yes** **or** **No**