Notes:

Key Features of Function Graphs

Created for you by Ms. Nhotsoubanh

Intercepts are the locations (points) where the graph crosses (or touches) either the x-axis or y-axis.

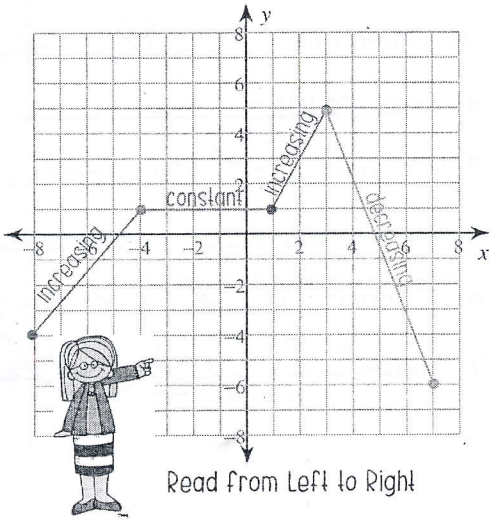
Increasing: a function is increasing, the graph has a positive slope.

Decreasing: A function is *decreasing* the graph has a negative slope.

Example:
The function is increasing on the x-intervals (-8, -4) and (1, 3).

The function is decreasing on the x-interval (3, 7).

The function is constant on the x-interval (-4, 1).



Read from Left to Right

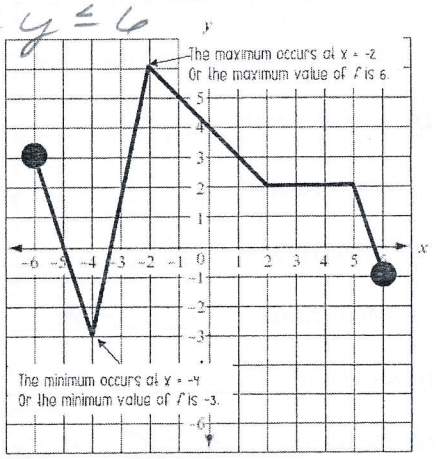
Domain: the x-values $-6 \leq x \leq 6$

Range: the y-values $-3 \leq y \leq 6$

Axis of symmetry: a line through a shape so that each side is a mirror image.

The maximum of a function is the largest function value, at 6

The minimum of a function is the smallest function value, at -3



Name: Key

Date: March 8 - Algebra 1 H

Glue on page 70

1. Find the key features of the function $f(x)$, graphed here.

a) Is the graph increasing or decreasing from $x = -2$ to $x = 0$? decreasing

b) Is the graph increasing or decreasing from $2 < x < 3$? increasing

c) x-intercept: (-1, 0) & (2, 0)

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

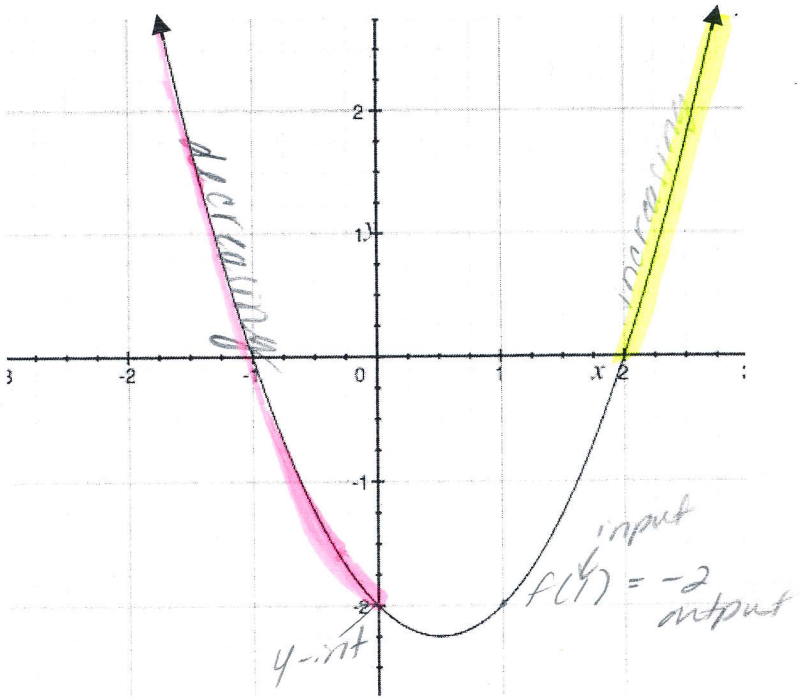
e) Evaluate $f(1)$ = -2

f) Maximum: does not have one

g) Minimum: the minimum is at -2.25

h) Domain: all real #s

i) Range: $y \geq -2.25$ or $[-2.25, \infty)$



2. Find the key features of the function $g(x)$ to the right.

a) Where is the graph increasing? never increasing

b) y-intercept: (0, -6)

c) x-intercept: (-2, 0)

d) Find $g(-3)$ = 1

e) Maximum: at 2

f) Minimum: there is no minimum pt

g) Domain: all real #s

h) Range: $y \leq 2$ or $(-\infty, 2]$