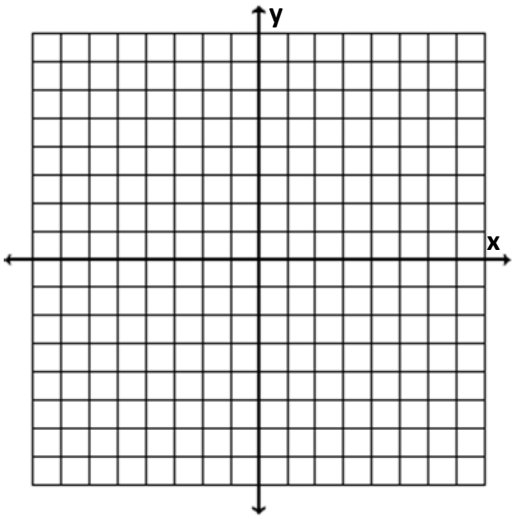
Pg. 66 1.6 – A Library of Parent Functions

Ex 1:
Write the linear function *f* such that it has the indicated function values.

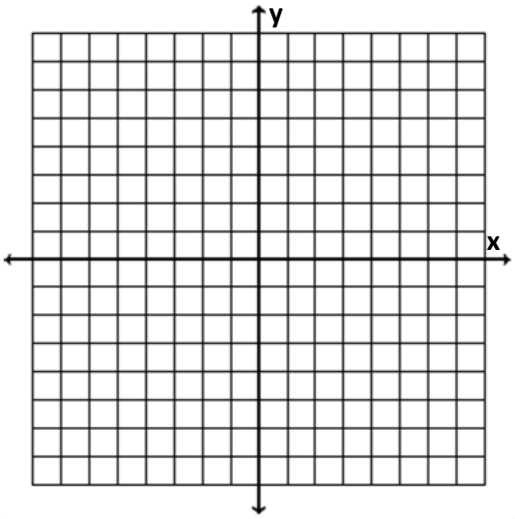
$f(-3) = -8, \quad f(1) = 2$

Ex 2:
Use a graphing utility to graph the function. Be sure to choose an appropriate viewing window.

a) $f(x) = -x^2 + 8x$



b) $h(x) = \sqrt{x+2} + 3$



Greatest Integer Function

$[\![x]\!]$ is the greatest integer less than or equal to x.

Ex: $[\![2.5]\!] =$ _____ $[\![1.2]\!] =$ _____ $[\![.4]\!] =$ _____ $[\![3]\!] =$ _____ $[\![5]\!] =$ _____

$[\![-1.2]\!] =$ _____ $[\![-2.7]\!] =$ _____ $[\![-.6]\!] =$ _____ $[\![-.1]\!] =$ _____ $[\![7.9]\!] =$ _____

Ex 3:
Evaluate the function for the indicated values.

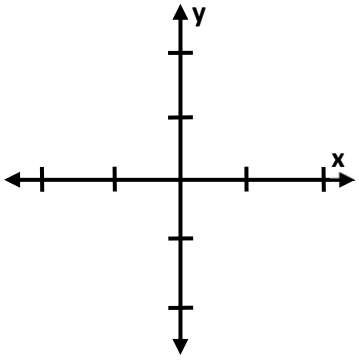
$g(x) = 2[\![x]\!]$

a) $g(-3)$ **b)** $g(0.25)$ **c)** $g(9.5)$ **d)** $g\left(\frac{11}{3}\right)$

Ex 4:
Sketch the graph of the function.

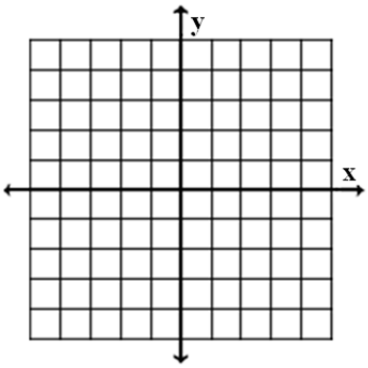
a) $g(x) = [\![x]\!]$

x	g(x)



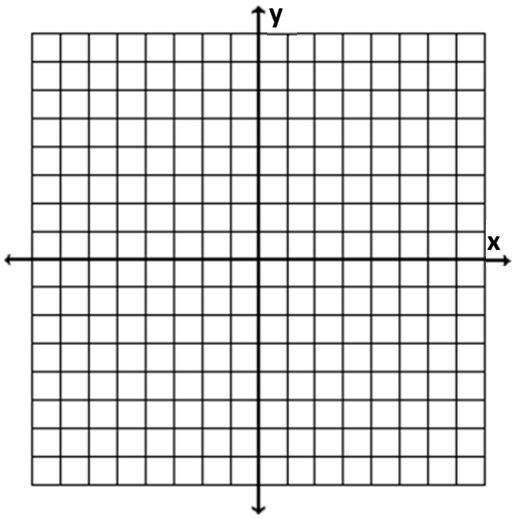
b) $f(x) = 4[\![x]\!]$

x	f(x)



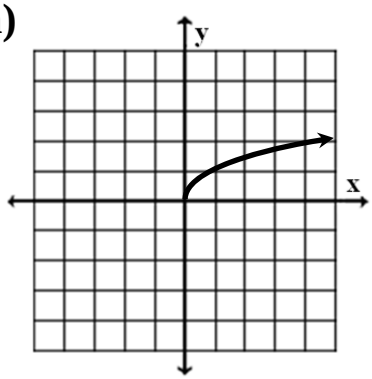
Ex 5:
Graph the function.

$$g(x) = \begin{cases} x+6, & x \le -4 \\ \frac{1}{2}x - 4, & x > -4 \end{cases}$$

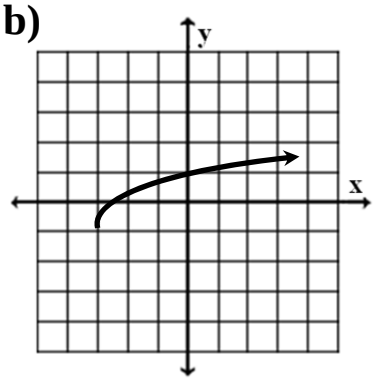


Ex 4:
Write the equation for the function shown on the graph.

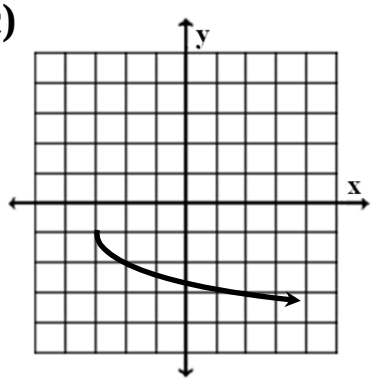
a)



b)



c)



Assignment 1.6

Pg. 71 Vocab #'s 1-9 ALL Problem Set #'s 1-49 ODD, 65, 71, 75

Check Answers Pg. A85