Chapter 1 Practice Test Name_____

_____1. Domain

_____2. Interval(s) where Decreasing

_____3. Interval(s) where Increasing

_____4. y-intercept

_____5. Constant interval

_____6. Range

_____7. Maximum

a. $(4,2)$

b. $(-\infty, 2]$

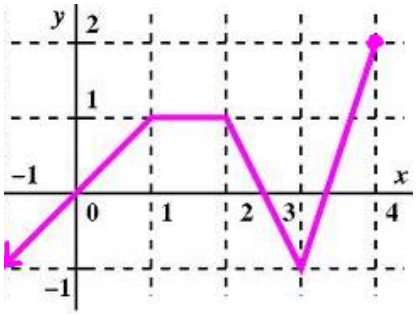
c. $(2, 3)$

d. $(1, 2)$

e. $(0, 0)$

f. $(-\infty, 1)$ and $(3,4)$

g. $(-\infty, 4]$



2. Use the graph below to answer the questions below. Estimate where needed.

a. The absolute minimum is:

b. The absolute maximum is:

b. The graph is increasing on the interval(s):

c. The graph is decreasing on the interval(s)

c. The graph is constant on the interval of:

d. The domain and range are:

g. Find f(1.5)

h) Find f(x) = 2

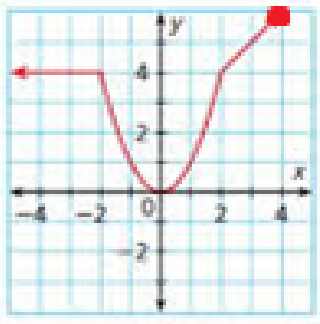
i. The *x*-intercept(s) are:

j. The *y*-intercept is:

k. Find when f(x) > 0

l. f(x) ≤ 0

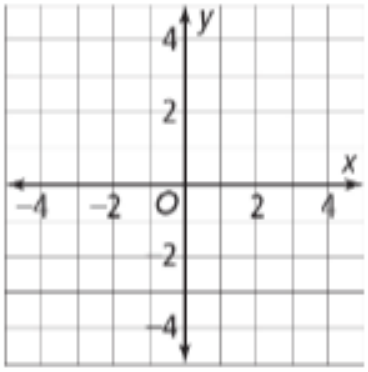
m. The average rate of change from x = 0 to x = 4 is?



2. A. Describe the translations of the parent function $f(x) = x^2$ that give $g(x) = -.25(x - 2)^2 + 3$.

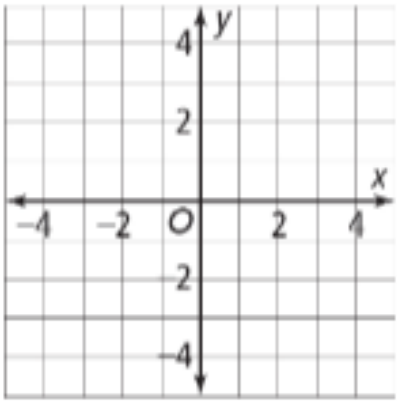
B. Sketch the Graph of g(x)

C. Give the Domain and Range of g(x).



3. Graph the piecewise function given below.

$$f(x) = \begin{cases} -4, & x \le -2 \\ x - 2, & -2 < x < 2 \\ -2x + 4, & x \ge 2 \end{cases}$$

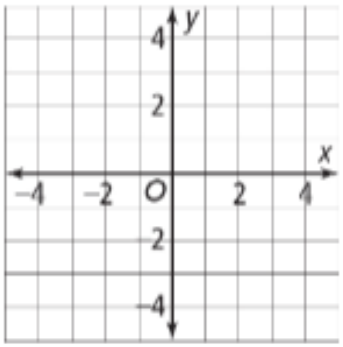


5. Use your calculator to graph and Solve $|x - 2| - 2 = (x + 5)^2$

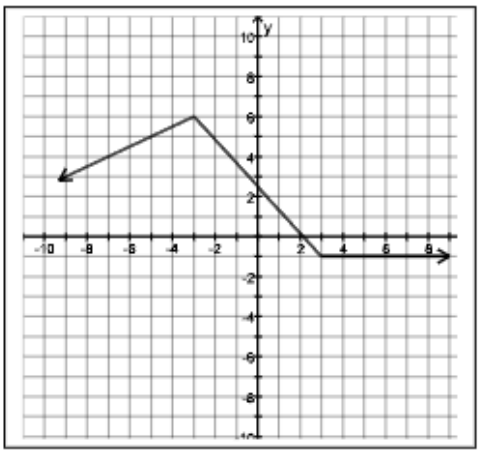
6. Use your calculator to graph and Solve $|x + 2| - 4 \le 0$ by graphing.

7. Graph the following equation by hand and determine the solution

$|x - 5| = 4x + 5$



8. Write the rule that defines the function in the following graph



10. Solve the system of equations algebraically

$$-6x - 2y - z = -17$$
$$5x + y - 6z = 19$$
$$-4x - 6y - 6z = -20$$