MAT150 - WORKSHEET - CHAPTER 1 **NAME:_____**

CLASS HOUR:_____

CONCEPT: Domains & Piece-Wise Graphs:

2. Find the domains of the following functions - State your answer in interval notation.
CIRCLE YOUR ANSWER

a) $y = x^3 - x^2$

b) $y = \sqrt{8 - 2x}$

c) $y = \dfrac{1}{x^2 - 9}$

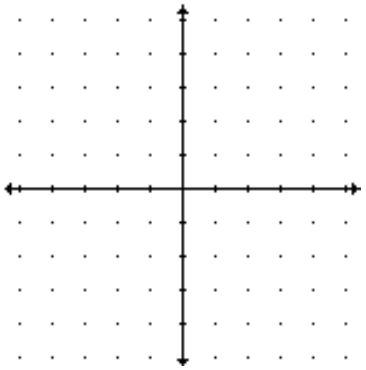
d) $y = \dfrac{x}{6x^2 + 7x - 3}$

e) $y = \dfrac{25 - x^2}{\sqrt{7x - 3}}$

Mat150 - Piecewise Function -

Given the following piecewise function

$$f(x) = \begin{cases} x & \text{if } -5 \le x < -2 \\ x+2 & \text{if } -2 \le x < 2 \\ x^2 & \text{if } x \ge 2 \end{cases}$$



a. Graph f(x)

b. State the Domain of f(x) _____

c. State the Range of f(x) _____

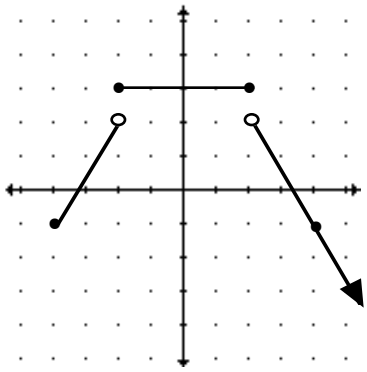
d. What is x when f(x) = 3? _____

e. What is f(9)? _____

f. What are the x-intercept(s)?
Write you answer if (x,y) form. _____

g. What is the y-intercept?
Write you answer if (x,y) form. _____

Given the following Graph, find the definition f(x):



$f(x) = \begin{cases} \\ \\ \\ \end{cases}$