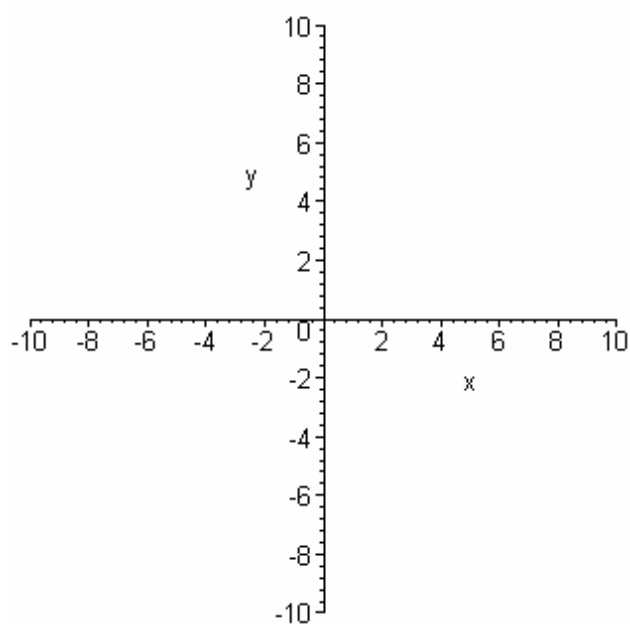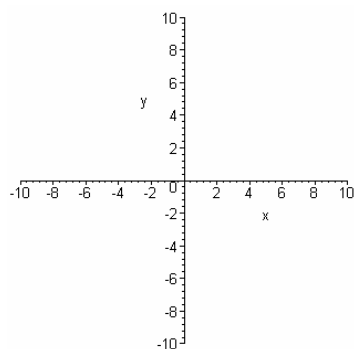Name:

QUIZ – MATH GRADE 11

1. (25%) Given the function: $f(x) = \begin{cases} x-1 & x < 2 \\ x^2 - 1 & x \geq 2 \end{cases}$
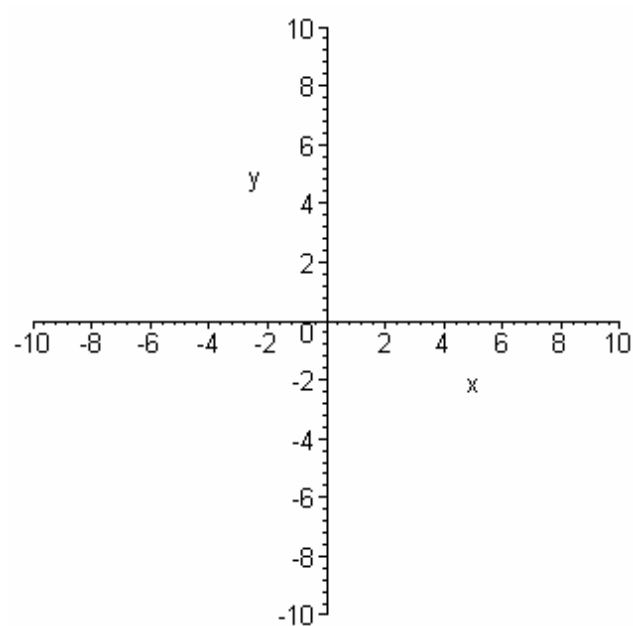
   a. (6%) Sketch each part on the left (indicate asymptotes and x and y intercepts on the graphs).
   b. (10%) Sketch the piecewise function. (indicate asymptotes and x and y intercepts on the graphs).
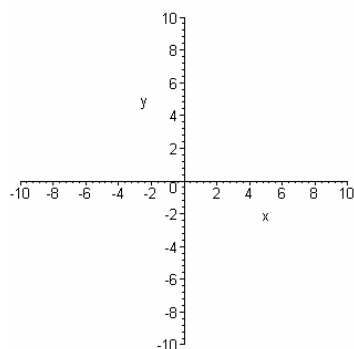
   c. (2%) State its domain:_____

   d. (3%) State its range:_____

   e. (2%) Increase:_____

   f. (2%)Decrease:_____

2. (25%) Given the function: $f(x) = \begin{cases} \ln(-x) & x < 1 \\ \dfrac{1}{2-x} & 1 < x \end{cases}$
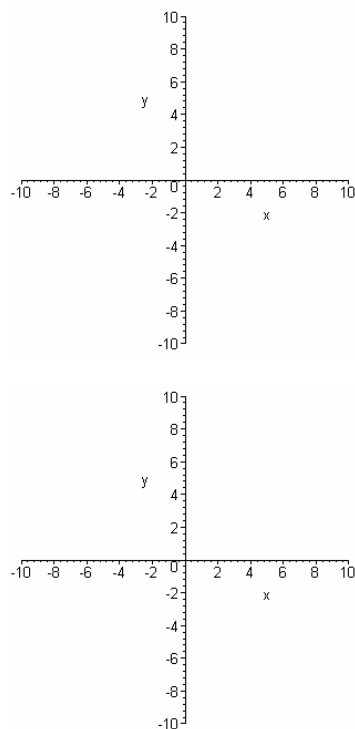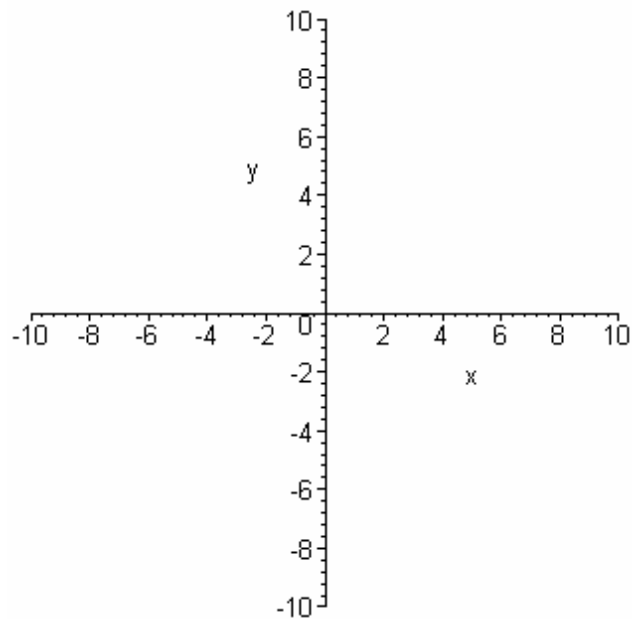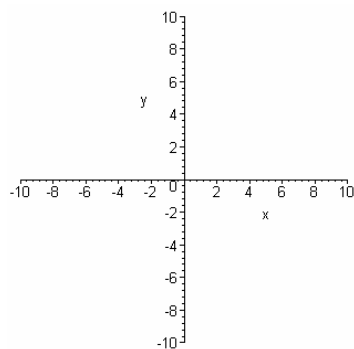
    a. (6%) Sketch each part on the left (indicate asymptotes and x and y intercepts on the graphs).

    b. (10%) Sketch the piecewise function. (indicate asymptotes and x and y intercepts on the graphs).

    c. (2%) State its domain:_____

    d. (3%) State its range:_____

    e. (2%) Increase:_____

    f. (2%)Decrease:_____

3. (25%) Given the function: $f(x) = \begin{cases} e^{(-x)} & x < 1 \\ -x^2 + 2 & 1 \le x \text{ and } x < 3 \\ -\sqrt{x-2} & 3 \le x \end{cases}$
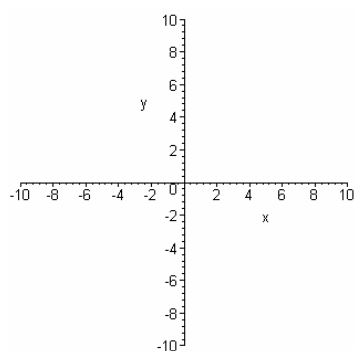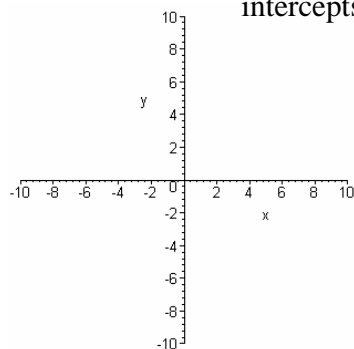
   a. (6%) Sketch each part on the left (indicate asymptotes and x and y intercepts on the graphs).

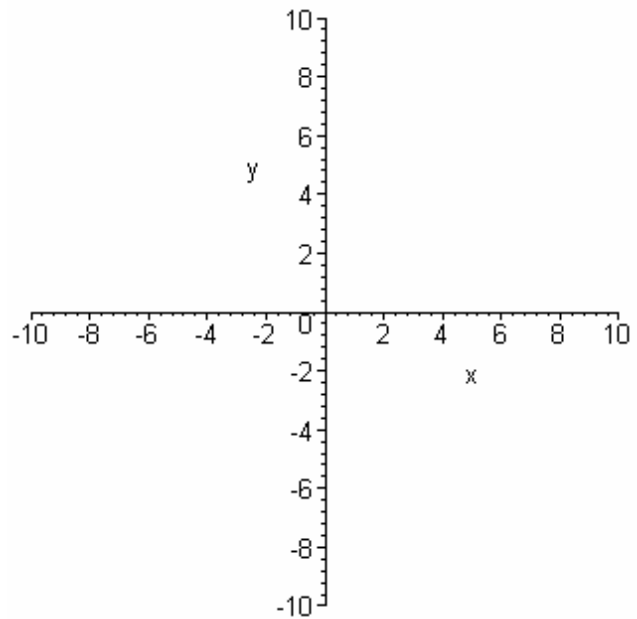   b. (10%) Sketch the piecewise function. (indicate asymptotes and x and y intercepts on the graphs).

   c. (2%) State its domain:_____

   d. (3%) State its range:_____

   e. (2%) Increase:_____

   f. (2%)Decrease:_____

4. (25%) Given the function:

$$f(x) = \begin{cases} -(x+1)^2 & x \le 0 \\ 2x - 1 & 0 < x \text{ and } x < 3 \\ e^x & 3 \le x \end{cases}$$

a. (6%) Sketch each part on the left (indicate asymptotes and x and y intercepts on the graphs).

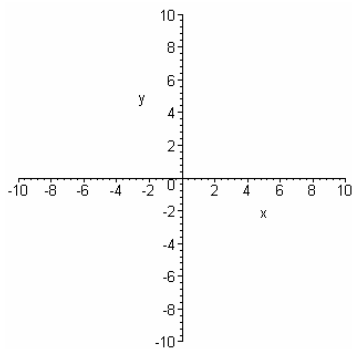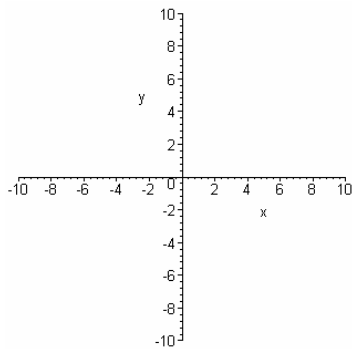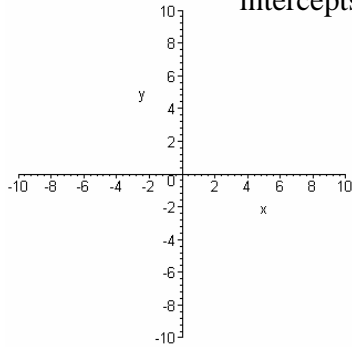b. (10%) Sketch the piecewise function. (indicate asymptotes and x and y intercepts on the graphs).

c. (2%) State its domain:_____

d. (3%) State its range:_____

e. (2%) Increase:_____

f. (2%)Decrease:_____

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