Calculus Worksheet #5 Unit 2 page 1 _____

Find all stationary points for each function and use the second derivative (if possible) to classify each as a minimum, a maximum, or neither. If the second derivative can not be used, then use any method you choose. Show your work and your solutions neatly organized.

1. $f(x) = 2x^2 - 8x + 3$

2. $f(x) = -x^2 - 8x + 5$

3. $f(x) = x^3 + 3x^2 - 9x - 15$

4. $f(x) = -x^3 - 6x^2 + 15x + 20$

Calculus Worksheet #5 Unit 2 page 2

Find all stationary points for each function and use the second derivative (if possible) to classify each as a minimum, a maximum, or neither. If the second derivative can not be used, then use any method you choose. Show your work and your solutions neatly organized.

5. $f(x) = x^3 - 12x^2 + 48x - 10$

6. $f(x) = 4x^3 + 2x^2 - x + 2$

7. $f(x) = \dfrac{x^2 + 4}{x}$

8. $f(x) = \dfrac{x^3 + 4}{x^2}$