

Calculus Class Worksheet #3 Unit 1 page 1

Find all stationary points for each of the following functions. Use values of $f(x)$, the function itself, to classify each as a maximum, a minimum, or neither. Show your work and your answers neatly organized.

1. $y = f(x) = x^2 + 3x - 10$

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

3. $y = f(x) = 4x^3 - 9x^2$

4. $y = f(x) = 3x^4 - 8x^3 - 12x^2$

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Find all stationary points for each of the following functions. Use values of $f'(x)$, the slope, to classify each as a maximum, a minimum, or neither. Show your work and your answers neatly organized.

5. $y = f(x) = 6 + x - x^2$

6. $y = f(x) = x^3 - 2x^2 - 4x + 8$

7. $y = f(x) = -x^3 + 3x^2 + 9x - 10$

8. $y = f(x) = x^4 - 8x^2 + 7$