

Name: _____

Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise.

1. Find intervals of increase/decrease and all relative extrema (both x and y coordinates) of the following:

$$f(x) = x^3 + 6x^2 + 9x - 8$$

2. Find intervals of concavity and any inflection points (both x and y coordinates) of $f(x) = x^4 - 4x^3$
3. Graph $f(x) = 2x^3 - 3x^2 + 6x$ using the curve sketching steps listed in class.