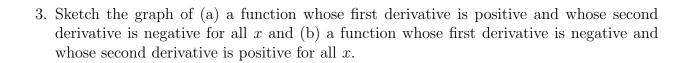
Math 2A Worksheet: 4.3 Derivative Tests

Write your names and Student ID numbers at the top of the page

- 1. Given $f(x) = 2x^3 9x^2 + 12x 3$ find,
 - (a) the intervals on which the function is increasing and decreasing,
 - (b) the local maximum and local minimum values, and
 - (c) the intervals of concavity and any inflection points.

2. Find the local extreme points and values functions using the first derivative test and again using the second derivative test.

$$f(x) = \frac{x^2}{x - 1}$$



4. In an episode of The Simpsons, Homer reads from a newspaper and announces "Here's good news! According to this eye-catching article, SAT scores are declining at a slower rate." Interpret Homer's statement in terms of a function and its first and second derivatives.