Quiz 1

Name: _______________________

1. Find the first two derivatives of $f(x) = x^2 e^{3x}$

   $f'(x) =$

   $f''(x) =$

2. Sketch the graph of $f(x) = x^3 - 3x^2 + 2$ showing

   (a) All local maxima and minima
   (b) The intervals where $f(x)$ is convex and the intervals where it is concave.
   (c) All inflection points