

### First Derivative Analysis

Analyze the function  $f(x) = -2x^3 + 6x^2 - 3$  using the 1<sup>st</sup> derivative analysis.

- a)  $f$  is increasing on:
- b)  $f$  is decreasing on:
- c)  $f$  has a local max at:
- d)  $f$  has a local min at:
- e) Sketch the graph of  $f$ .