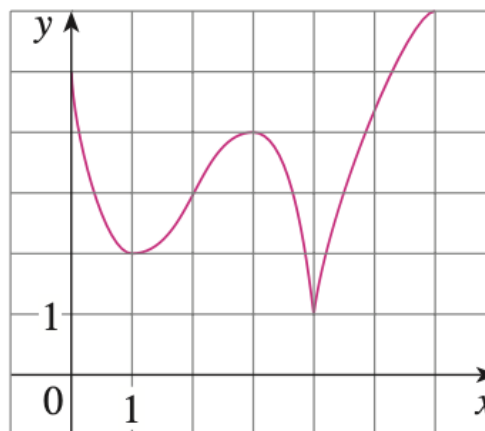


Reading Stewart §3.1, 3.3.

1. Use the Closed Interval Method to find the absolute maximum and absolute minimum values of $f(x) = -24 + 54x - 2x^3$ on the interval $[0, 4]$.
2. Use the Closed Interval Method to find the absolute maximum and absolute minimum values of $g(t) = 3t^4 - 4t^3 - 12t^2 + 3$ on the interval $[-2, 2]$.
3. Use the Closed Interval Method to find the absolute maximum and absolute minimum values of $h(x) = x\sqrt{4 - x^2}$ on the interval $[-1, 2]$.

Note The remaining problems concern topics that we'll discuss more on Monday. Although they are on the problem set this week, I will not put them on Friday's exam, since they were not discussed by Friday's class.

4. Use the given graph of f to find the following.
 - (a) The open intervals on which f is increasing.
 - (b) The open intervals on which f is decreasing.
 - (c) The open intervals on which f is concave upward.
 - (d) The open intervals on which f is concave downward.
 - (e) The coordinates of the points of inflection.



5. The graph of the *derivative* f' of a function f is shown.
 - (a) On what intervals is f increasing or decreasing?
 - (b) At what values of x does f have a local maximum or minimum?

