

Name:

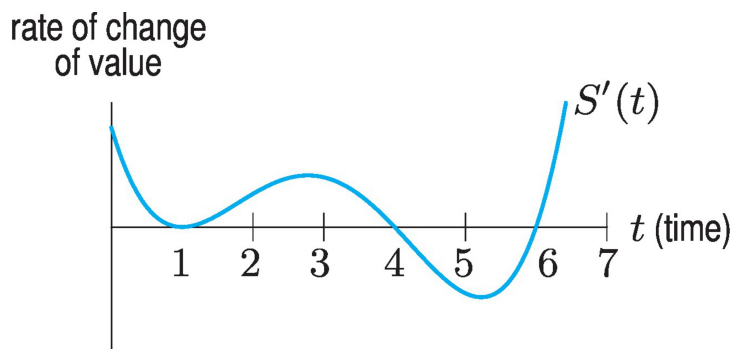
Section 4.1 & 4.2 – In class examples

Math 151 – Spring 2018

Section 4.1

1. Find and classify the critical points of $x^3 - 9x^2 - 48x + 52$ using the second derivative test.

2. The value of an investment at time t is given by $S(t)$. The rate of change, $S'(t)$, of the value of the investment is shown in the figure below



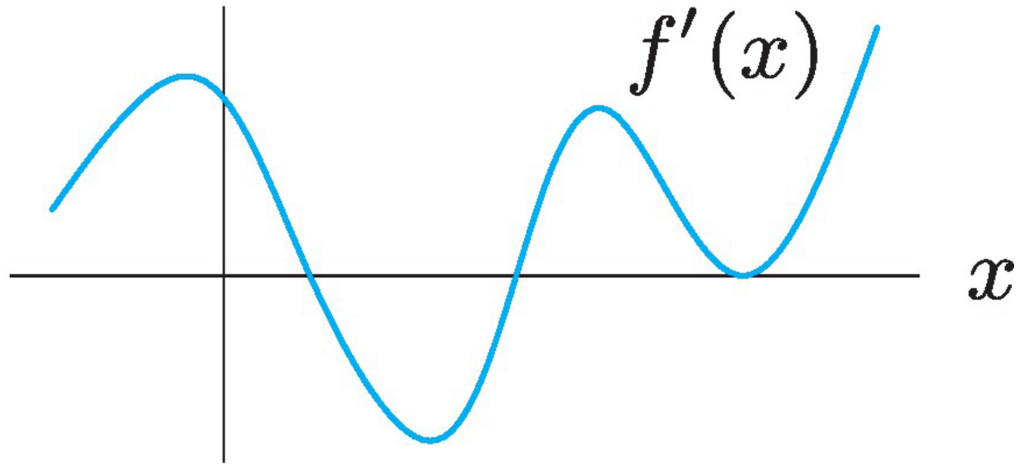
(a) What are the critical points of the function $S(t)$.

(b) Identify each critical point as a local maximum, a local minimum, or neither.

(c) Explain the financial significance of each of the critical points.

Section 4.2

1. Indicate on the graph of the derivative, f' the x -values that are inflection points of the function f .



2. Find the inflection points of $f(x) = x^4 + x^3 - 3x^2 + 2$.