

Calculus

Chapter 4: Applications of Derivatives

Lesson 2: Analyzing Functions Part II: Maximums and Minimums

Question #1

Reference Q.520

Sketch a graph of a function with the following attributes:

$f(x)$ is concave up everywhere and one local max and one local min

Question #2

Reference Q.521

Sketch a graph of a function with the following attributes:

$f(x)$ is concave down everywhere and has no local max or min.

Question #3

Reference Q.522

Use f' and f'' to find the local maximum or minimum of

$f(x) = 2x^3 - 6x + 5$.

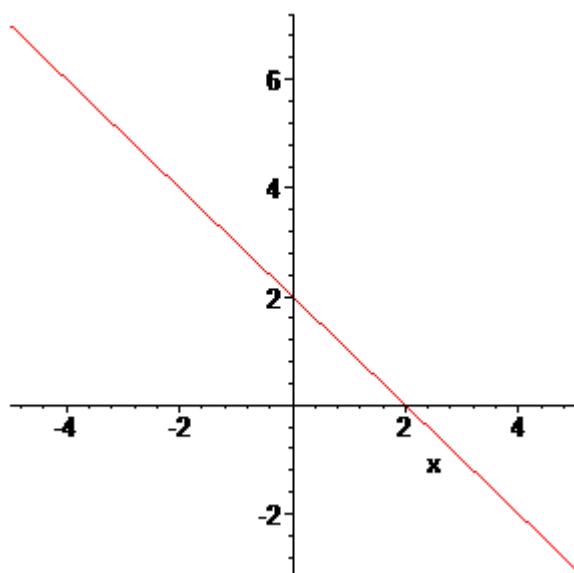
Question #4

Reference Q.523

The following is a graph of $f'(x)$. (NOT $f(x)$)

a. a) What are the local max's or min's and where do they occur?

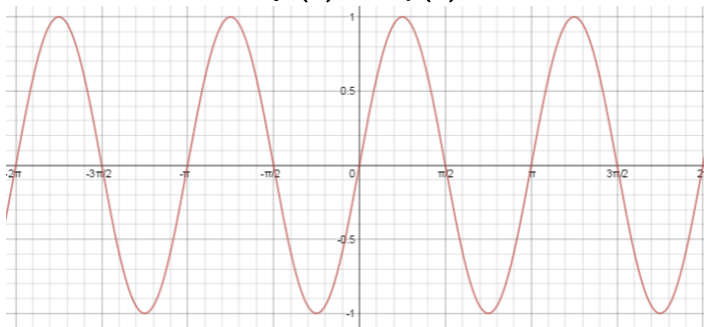
b. b) Are there any possible points of inflections?



Question #5

Reference Q.524

The following is a graph of $f'(x)$. (NOT $f(x)$)



a. a) What are the local max's or min's and where do they occur?

b. b) Are there any possible points of inflection?

Question #6

Reference Q.525

Find all the critical points and determine whether each is a local maximum or minimum or neither.

$f'(x) = x^2(3 - x)$