Introduction to Optimization

Relative Extrema – Group Assignment

Directions: Find the relative minimums and maximums of the following functions on each given interval. Specify where they occur.

1) $f(x) = x^2 + 6x$ [-5,1]

2) $f(x) = \cos^2 x - \sin x$ $[\Pi, 2\Pi]$

3) $f(x) = x^3 - 12x + 5$ $(-\infty, \infty)$

4) $f(x) = \dfrac{3x}{x^2 + 4}$ $[0, \infty)$