

MATH 30, 4/10/2020: CORONA QUIZ 8

Problem. For the function $f(x) = 3x^3 + x^2 + 1$, determine

- a. intervals where f is increasing or decreasing,
- b. local minima and maxima of f ,
- c. intervals where f is concave up and concave down, and
- d. the inflection points of f .
- e. Also, draw a rough sketch of the graph of f illustrating parts (a), (b), (c), and (d).

Show all your work.