

Name:
Department:

Grade: /10

Math 101, Calculus I, Fall 2023, Sec. 1, HTK
Quiz 3, Fri., Nov. 3

1. Show that $g(x) = x^4 - 2x^3 + 6x^2 - 2x - 1$ has exactly 2 distinct real roots.
2. The function f is defined and **continuous** on all of $(-\infty, +\infty)$ and the graph of its **derivative** f' is shown below. Find all intervals on which f is increasing, decreasing, concave up, and concave down. Find all local maximum and minimum points and all inflection points of f .

