

ECO137 Quiz 1 (Nov. 12, 2018) ID: _____ NAME: _____

Question 1: Derive the function which goes through two points, (2, 8) and (-4, 5).

Question 2. For $f(x) = 2x^3 - 3x^2 - 11x + 6$, answer the following questions.

(a) Apply Rational Root Theorem and find all the candidate roots and one actual root.

(b) Apply Quadratic Deviation and Quadratic Formula to find other roots.

(c) By calculating the first derivative of $f(x)$ and setting = 0 (and apply the quadratic formula), find the (x,y) coordinates for the peak/bottom of the concave/convex function.

(d) Draw this function by identifying (i) y-intercept, (ii) roots, (iii) (local) max/min (answers from part (c)) points in the figure clearly.