

Work carefully and neatly. You must show all relevant work! You may receive no credit if there is insufficient work. NO GRAPHING CALCULATORS!

- [5pts] 1. Find the absolute extrema for the function $f(x) = 2x^3 - 9x^2 - 60x + 1$, on the interval $[-3, 0]$

- [5pts] 2. A box with an open top and a square base is to be constructed to have a volume of 6 cubic inches. If material for the sides is 2 cents per square inch, and material for the bottom is 3 cents per square inch, what should the dimensions of the box be to minimize the cost?