

Quiz 1 - MATH 151

DATE: Week 2, January 21-25

INSTRUCTOR: George Voutsadakis

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points.

GOOD LUCK!!

1. Find the vertex, the axis of symmetry, the opening direction and the intercepts and, then, roughly (but clearly) sketch the graph of the function $f(x) = -x^2 + 2x + 3$ indicating all points collected.
2. The price p and the quantity x sold of a certain product obey the demand equation $x = -\frac{1}{7}x + 100, 0 \leq p \leq 700$.
 - (a) Express the revenue R as a function of x .
 - (b) What quantity x maximizes the revenue?
 - (c) What is the maximum revenue?