QUIZ 2 - MATH 111 Friday, September 2

YOUR NAME:_____ George Voutsadakis

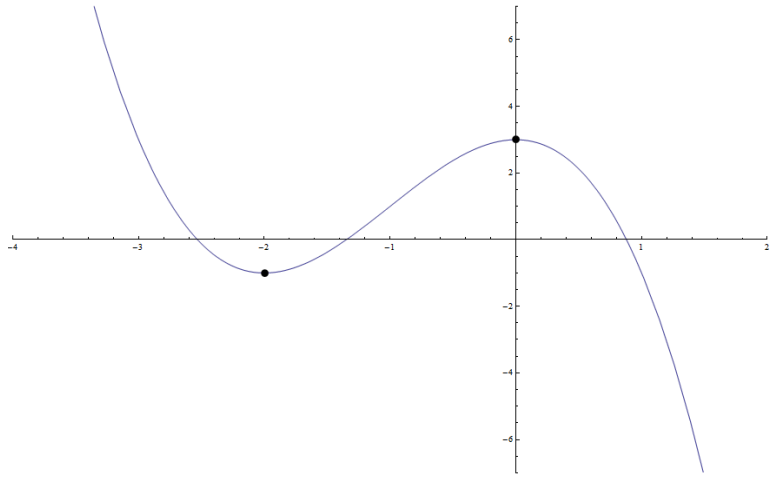
Read each problem **very carefully** before starting to solve it and do only what is asked. Each problem is worth around 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. [3 points] Find the domain of the function $f(x) = \sqrt{7 - 2x}$ (without graphing) and write your answer in interval notation.

2. [3 points] A candy store sells a special Halloween candy. If a customer buys up to 7 pounds of candy, the price is \$5.00 per pound. However, if the quantity bought exceeds 7 pounds, the store charges only \$4.00 per pound for every additional pound (in excess of 7). Write a piece-wise defined function giving the cost C in terms of the number n of pounds of candy purchased.

3. [3 points] Find the average rate of change of $f(x) = x^2 - \dfrac{12}{x}$ over the interval $[2, 6]$.

4. [3 points] The graph of $f(x)$ is shown in the figure.



(a) Identify the intervals over which $y = f(x)$ is decreasing.

(b) Find the local max/min points of $y = f(x)$.