QUIZ 3 - MATH 111 Friday, February 17

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. [4 points]

   (a) Describe both algebraically and geometrically the transformations that lead from $y = f(x)$ to $g(x) = 2f(x+3) - 5$.

   $y = f(x) \longrightarrow$ ( )

   $\longrightarrow$ ( )

   $\longrightarrow \; y = 2f(x+3) - 5$ ( )

   (b) Assuming that f is described by the following table, create a table that fully describes the function g of Part (a).

x	-3	-1	0	1	5
$f(x)$	-10	-5	2	7	10

2. [4 points] Find all values of the input x for which the function $f(x) = |3x - 10| + 15$ outputs the value 32.

3. [4 points] Find a formula for the inverse function $f^{-1}(x)$ if $f(x) = \dfrac{x+5}{7-2x}$.