COMPLEX ANALYSIS 1 (MATH 5510)
TEST 2 # 5 Solution - Fall 2017

NAME _____ E-NUMBER _____

Be clear on your proofs. Give all details and explain **why** each claim you make is justified. Write in complete sentences. Give the level of detail in your solutions which I have given in the solutions I have posted.

5. (Exercise IV.2.11(a)) Find the domain if analyticity of $f(z) = \dfrac{1}{2i} \log \left(\dfrac{1 + iz}{1 - iz} \right)$. HINT: You will find the Möbius transformation $T(z) = \dfrac{1 + iz}{1 - iz}$ useful.