

Name: _____

Date: _____

Instructions: Though calculators can be used for all the questions, all problems require you to show your work. Any answer without proper justification will receive **ZERO** credit. Only **EXACT** answers will receive full credit unless otherwise noted.

Use Newton's Method to determine the first positive root of $f(x) = \tan x - 2x$

1. Determine the formula to find the $n + 1$ root
2. Use an initial value of $x = 1.5$ and your calculator to approximate the sought after root. Terminate the process when successive iterations agree to 4 decimal places.