MATH 107 Quiz 4

Name:_____ Score:_____

Instructions: You must show supporting work to receive full and partial credits. No text book, notes, formula sheets allowed.

1(4pts) A rocket weighs 8000 pounds at launch and loses 1 pound of fuel for every 10 feet of altitude gained. Find the work needed to raise the rocket to a height of 10,000 feet.

2(6pts) The Great Pyramid at Gizeh is 500 feet high rising from a square base of side 750 feet.

(a)(4pts) If the stone making up the pyramid has density 200 pounds per cubic foot, find the total amount of work done in building the pyramid.

(b)(2pts) It is reported that the pyramid was built in 20 years. Assuming a typical laborer performed 1.2×10^8 foot-pounds of work over a 20 year period. Find the number of workers needed to build the pyramid.

(*... The End*)