

Name: _____

Math 252 Calculus II (Bueler)

Wednesday 31 January 2018

Quiz #3

In class. 25 minutes. No textbook or notes or calculator. 30 points total.

1. (*10 pts*) A 60 meter climbing rope weighing 4 kg is hanging from your hand as you stand on a ledge on a big cliff. The rope does not touch the ground. How much work in Newtons is needed to coil it in your hand? Use 10 m/s^2 as the acceleration of gravity and simplify your answer.

2. (*5 pts*) Find the average value f_{ave} of the function $f(x) = 1/x$ on the interval $[3, 7]$.

3. (8 pts)

$$\int_{-1}^1 x e^x dx =$$

4. (7 pts)

$$\int \arctan x dx =$$