EE 381 Quiz 5 – Practice

Name, I.D. #, and Date: _____

Instructions: No electronics other than a calculator. You have only one chance to complete it. There is a time limit of 25 minutes.

1.) (3.5 pts.) Bars of soap at a soap shop have a mean length of 8 cm with a standard deviation of 1 cm. In a window display 36 bars of soap are laid end to end with no gaps. What is the probability that the total length of the line of soaps is less than 279 cm?

2.) (3.5 pts.) A mature Hass avocado has a mean weight of 6 ounces with a standard deviation of 0.75 ounces and this weight variable is normally distributed. What is the probability a random sample of 25 mature Hass avocados has sample mean weight of more than 6.25 ounces?

3.) (3 pts.) A book on reserve at the library has a checkout time that is exponentially distributed with an average of 30 minutes. If you arrive at noon and find the book checked out what is the probability that you will have to wait less than 15 minutes?

$z = \frac{\bar{X} - \mu}{\sigma / \sqrt{n}}$ $f_T(t) = \lambda e^{\lambda t}$ $z = \frac{S_n - n\mu}{\sqrt{n}\,\sigma}$