Quiz #2 STA2023
Basic Normal Curves

Name________________________
Times/Days attend class________________________
Date________________________

Provide all of your work and answers in the spaces provided. However, you may attach additional work if you want to. **Show all work for full credit.** Your submitted quiz should not be a rough draft. You are allowed to seek out help from the Math Support Center, study groups, and/or the class instructor, but you must submit only your own work: do not copy! Remember, even though you may work with other people, you are graded individually. Write up your final draft by yourself and in your own style. Your work/responses must be your own. There are two printed pages to this quiz.

1. (2 pts.) Using the Empirical Rule only, state the area under the Standard Normal Curve between $-1$ and $1$.

2. (3 pts.) Calculate $P(z > 0.65)$. Round your answers to four decimal places. Don’t put down just the answer, i.e., **show all work for full credit!**

3. The mean number of hours American workers spend on the computer is 3.1 hours per workday. Assume that the standard deviation is 0.5 hour and that the variable is normally distributed.

   a) (4 pts.) **Clearly, with detail, and using appropriate notation,** label the distribution of hours that American workers spend on the computer per weekday.
3. Continued

Now use your calculator to answer the following questions. Round your answers to four decimal places. Don’t put down just answers, i.e., **show all work for full credit!**

b) (3 pts.) What percent of American workers spend between two to two and a half hours on the computer?

c) (3 pts.) What is the probability that a random worker spends 3.8 hours or less on the computer?

d) (4 pts.) How long does an American worker spend on a computer if his/her time is in the lowest 25 percent?

e) (3 pts.) What proportion of American workers spend more than 5 hours on the computer?

f) (3 pts.) What is the z-score for a time of 141 minutes?