1. You want to show that listening to metal bands decreases life expectancy. Assume the average U.S. lifespan is 75 years with standard deviation 8 years. You want to prove your claim at the 0.05 level.

   _____ What is the probability of Type I error?

   _____ What is the probability that you fail to reject the null hypothesis when it is true?

   _____ A sample of 36 metalheads has an average lifespan of 72 years. What is your test statistic?

   _____ What is your P-value?

   In a clear sentence, what conclusion do you draw?

   _____

2. Prof. Banks wants to show that students who take his class get salaries greater than $62K. Of 10 students in a class of 20, the mean starting salary is $65K with a sample sd of $5K.
   In words, what is his alternative hypothesis?

   _____

   _____ What is the test statistic?

   _____ What kind of critical value does he use? (Include df if necessary.)

   _____ What is his P-value? (Give a range if necessary.)

   In words, what is his conclusion? Use $\alpha = 0.05$.

   _____