Problem 1) You have a random sample of size 15 from a normally distributed population with variance of 2 and unknown mean. We will test the null hypothesis that μ = 1 against the alternative that μ = 7.

Find a rejection region so that α = 0.05.

Find the power of the test.

If the outcome of the sample mean is 1.5, will you reject H0? What if it is 2?