Exercise 13
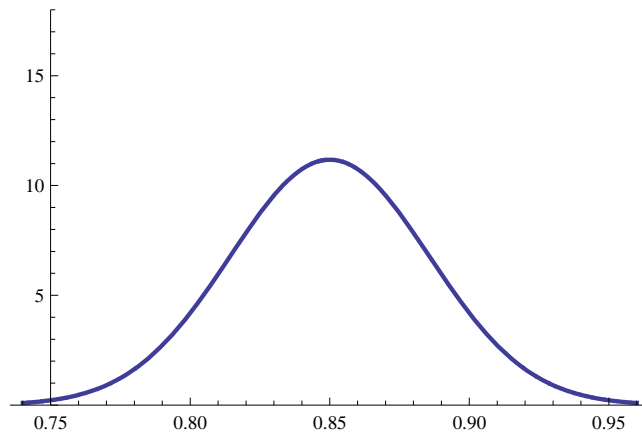
(a) The mean is 0.85 and the standard deviation is

$$\sqrt{\frac{(0.85)(0.15)}{100}} = 0.0357.$$

Here is the graph of the null distribution.

(b) The sample proportion is $\hat{p} = \frac{90}{100} = 0.90$.

(c) The p-value is given by

$$\texttt{normalcdf(.90,E99,.85,.0357)} = 0.0807.$$

(d) At the 5% level, this is not statistically significant because the p-value is greater than 0.05.