Homework Solutions
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Exercise 28

(a) Because this is a single husk (not a sample), we must use the uniform distribution. The height of the graph is $\frac{1}{8}$, so the probability that the husk is longer than 13 inches is $\frac{1}{8}(16 - 13) = \frac{3}{8} = 0.375$.

(b) The sample mean of 50 husks has a normal distribution with mean 12 and standard deviation $\frac{2.3}{\sqrt{50}} = 0.3253$. So the probability that the average husk length is greater than 13 inches is `normalcdf(13,E99,12,0.3252)` $= 0.001056$. You might use `normalcdf(13,16,12,0.3252)` instead, because the husks cannot be more than 16 inches long, but the answer will be the same.

(c) No. Although the answer will be fairly close to correct, it will not be correct because the sample size is too small.