1. This exercise gives you practice in calculating probabilities under the standard normal curve. See lecture notes for unit 5 page 14. A good url to use is

   [http://davidmlane.com/hyperstat/z_table.html](http://davidmlane.com/hyperstat/z_table.html)

Recall the convention of using the letter Z to represent a random variable that is distributed standard normal. Find the proportion of observations from a standard normal distribution that satisfies each of the following statements.

   a. $Z < 2.85$
   
   b. $Z > 2.85$
   
   c. $Z > -1.66$
   
   d. $-1.66 < Z < 2.85$
   
   e. $Z < -2.25$
   
   f. $Z > -2.25$
   
   g. $Z > 1.77$
   
   h. $-2.25 < Z < 1.77$

2. This exercise gives you practice in calculating probabilities under normal curves with non-zero mean and non-unit variance. The same url will work for this exercise too.

   [http://davidmlane.com/hyperstat/z_table.html](http://davidmlane.com/hyperstat/z_table.html)

The height, $X$, of young American women is distributed normal with mean $\mu=65.5$ and standard deviation $\sigma=2.5$ inches. Find the probability of each of the following events.

   a. $X < 67$
   
   b. $64 < X < 67$