Class Practice on Normal Distribution (1)

1. Heights of females in a certain country are normally distributed with a mean equal to 66 inches and a standard deviation equal to 3 inches.
   a. Display all this information on a completely labeled Bell curve.
   b. Determine the percent of females whose heights are between 60 and 75 inches. (Show work)
   c. Determine the percent of females who are taller than 72 inches. (Show work)
   d. In a group of 200 women, how many would be taller than 72 inches? (Show work)
Answers

a. Display all this information on a completely labeled Bell curve.

b. Determine the percent of females whose heights are between 60 and 75 inches. (Show work)

Adding the percents in the shaded regions we get

13.5% + 34% + 34% + 13.5% + 2.35% = 97.35%
c. Determine the percent of females who are taller than 72 inches.
   (Show work)

Adding the percents in the shaded regions we get:

\[ 2.35\% + 0.15\% = 2.5\% \]

d. In a group of 200 women, how many would be taller than 72 inches?
   (Show work)

We need to compute 2.5\% of 200 = (.025)(200) = 5 women would be taller than 72 inches.