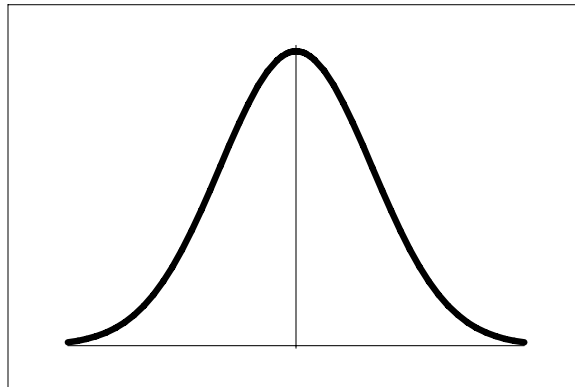


The Mean:

The Center Of Gravity of Data

Standard Deviation: A measure of spread of data

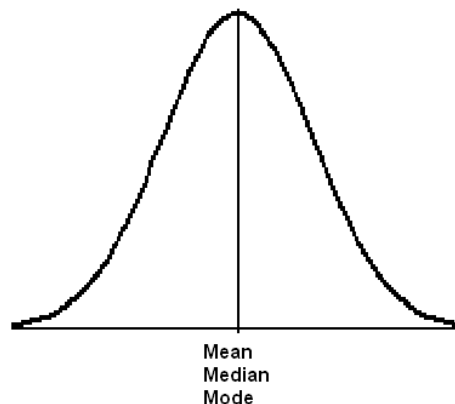
Standard deviation gives a very nice idea of the Spread the the Data around the mean if the distribution of a data is a normal distribution



Median: The middle of a numerical data, when the data is arranged in order

Mode: The most frequent observation (numerical or catagorical) in a data

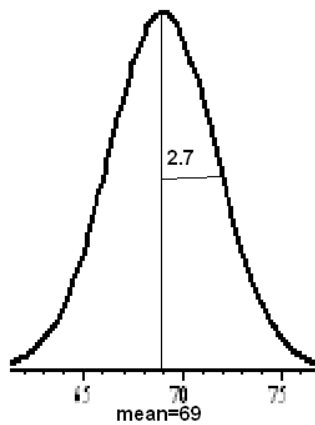
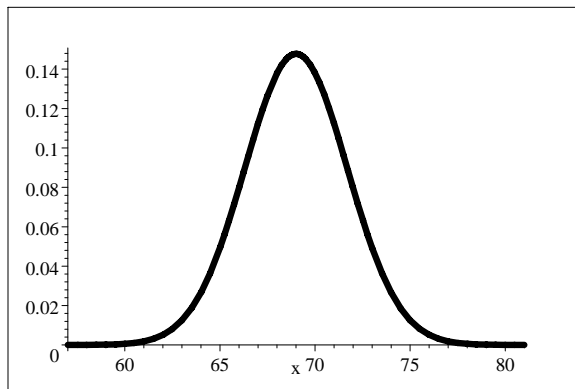
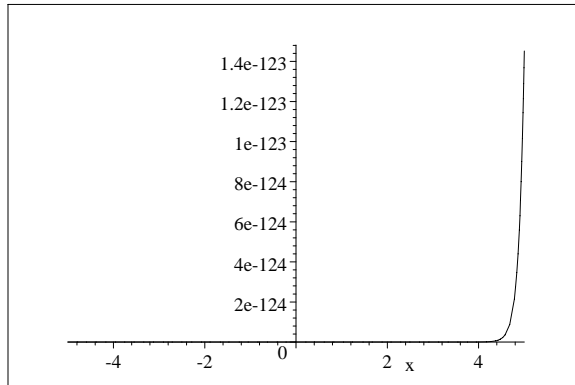
For a normal distribution, the mean, the median, and the mode are the same



Example: The heights of adult males in a certain region show a normal distribution with mean 69" and standard deviation 2.7."

$$h(x) = \frac{1}{2.7\sqrt{2\pi}} e^{-((x-69)^2/(2 \times 2.7^2))}$$

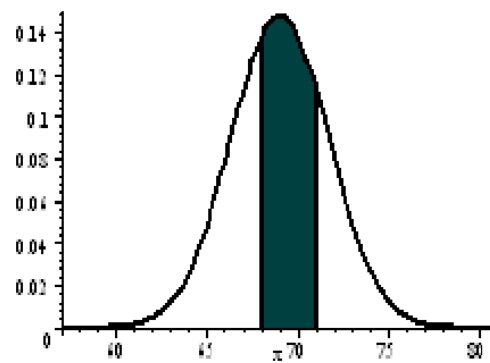
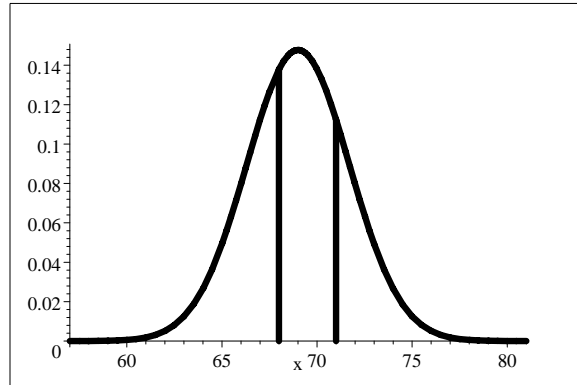
$h(x)$



To answer a question:

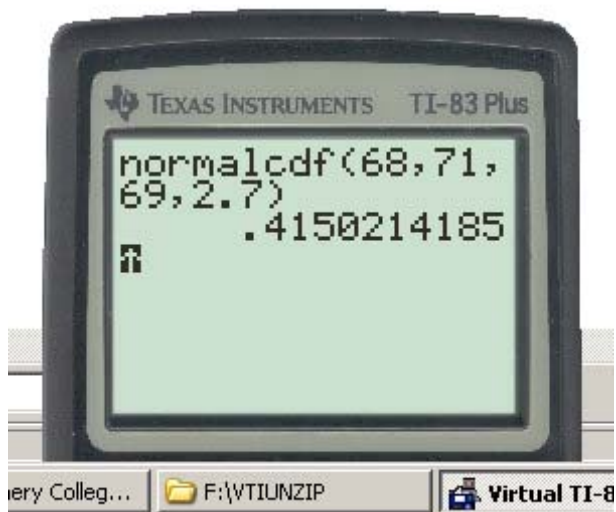
What % of adult males in this region have heights between 68" and 71"?

The answer will be the area shown below (actually proportion)



To find this area in your calculator,
Go to 2nd, VARS (DISTR)

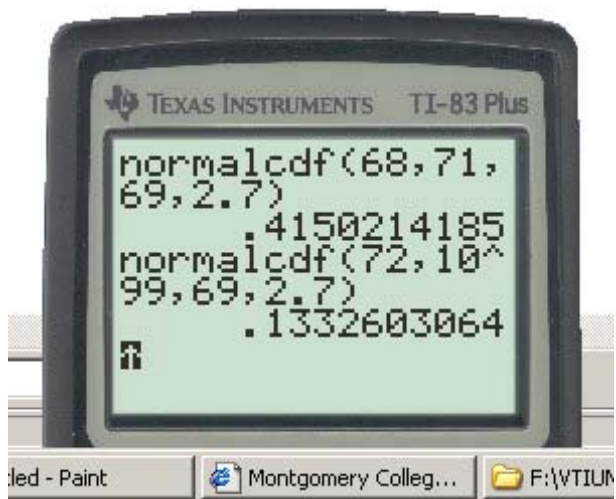




about 42% of the adult males in the region have heights between 68" and 71"

Another Question:

What percent of adult males in this region are taller than 72" ?



about 13.3%

Look at 68-95-99.7 rule in the text

Non Normal Distribution

(saw the video))

Many others:

Homeprices

Watched "Tales of the Peacock's Tail" video