

# I am still NORMAL?

## Activity 4: Normal Distributions (Scores and Values)

- 1) Assume that women's weights are normally distributed with a mean of 143 pounds and a standard deviation of 29 pounds.

Sketch a graph of the distribution and find the indicated probability. (Do the first 2 by hand and the second two using your calculator.)

a)  $P(143 < x < 172)$

b)  $P(150 < x < 180)$

c)  $P(x > 150)$

d)  $P(x < 186.5)$

Assume that women's weights are normally distributed with a mean of 143 pounds and a standard deviation of 29 pounds.

e) Find the third quartile. (What is the weight separating the bottom 75% from the top 25 %?)

f) Find the weight separating the bottom 15% from the top 85%.