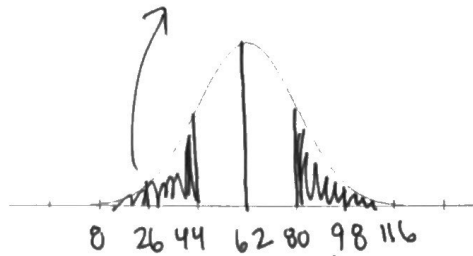


## NORMAL DISTRIBUTION HW (Empirical Rule) 68, 95, 99.7 Rule

Suppose the monthly charge for cell phone plans is normally distributed with mean = \$62 and standard deviation = \$18. (Source: based on information from Consumers Report)

- 1) Label the normal curve with the given parameters. Shade the region that represents the percent of plans that charge less than \$44. What is the probability that a randomly selected plan will charge less than \$44?

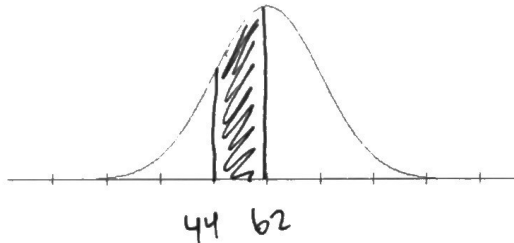


16%

- 2) What is the probability a randomly selected plan will charge more than \$80? Use a different color and shade the region that represents this situation. Write that percent on your shading.

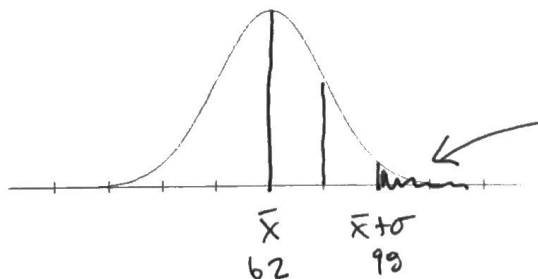
16%

- 3) What is the probability a randomly selected plan will charge between \$44 and \$62? Shade the region that represents this situation below and write that percent on your shading.



34%

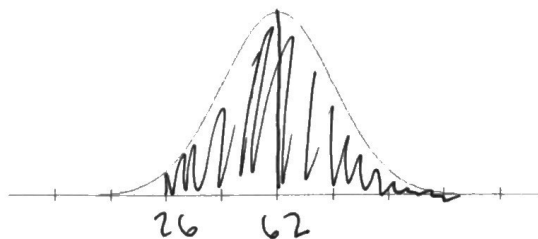
- 4) What percent of the cell plans would be above two standard deviations above the mean? Shade the region that represents this situation below and write that percent on your shading.



$$2.35 + 0.15 =$$

2.5%

- 5) What percentage of the cell plans would cost more than \$26? Shade the region that represents this situation below and write that percent on your shading.

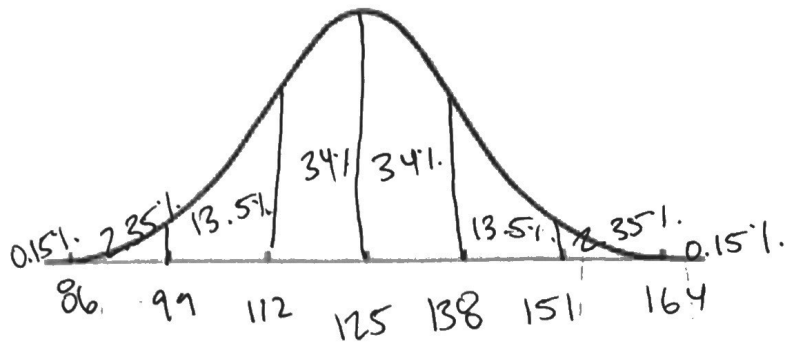


97.5%

(6-9) As part of

2000 patients in a hospital are recorded. The systolic blood pressures (given in mm) have an approximately normal distribution with mean = 125 and standard deviation = 13.

a research project the blood pressures of



6) Estimate the number of patients whose blood pressure was between 99 and 151 mm.

95%

7) Estimate the number of patients whose blood pressure was between 112 and 151 mm.

81.5% ~~at 151~~

8) Estimate the number of patients whose blood pressure was 99 mm or higher.

97.5%

9) Estimate the number of patients whose blood pressure was between 99 and 138 mm.

81.5%