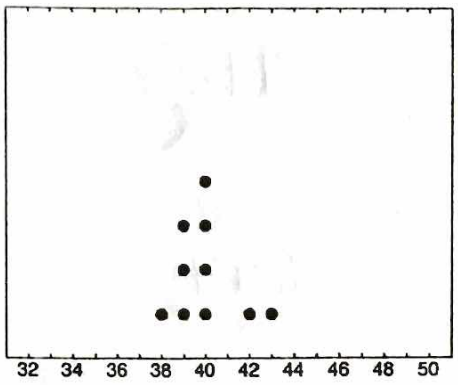
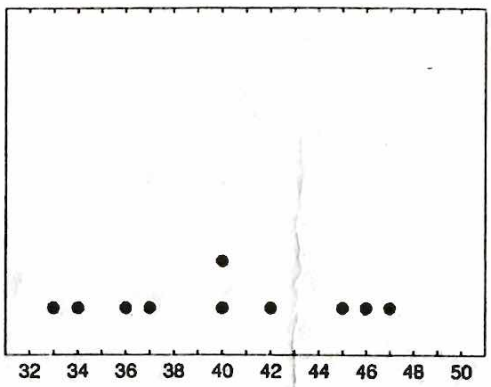
Review – *Interpreting Distributions* Name Key Per____

The dot plots below show the average heights of four-year-olds (in inches). The graph on the left shows the data of several girls, the graph on the right shows the data of several boys.



(a) Set I



(b) Set II

1. How many girls were measured? How many boys?

10 girls 10 boys

2. Do girls or boys have a greater standard deviation? Explain.

Boys have a greater stadard deviation (data more spread out)

3. What is the mean, median, and mode for the boys?

mean = 40
median = 40
mode = 40

4. Is the mean or median higher for the girls?

mean = 40
median = 40 > same

5. Is the boys' data best described as symmetric, skewed left, or skewed right?

Symmetric

6. Jane is the shortest girl. How tall is Jane?

38 inches

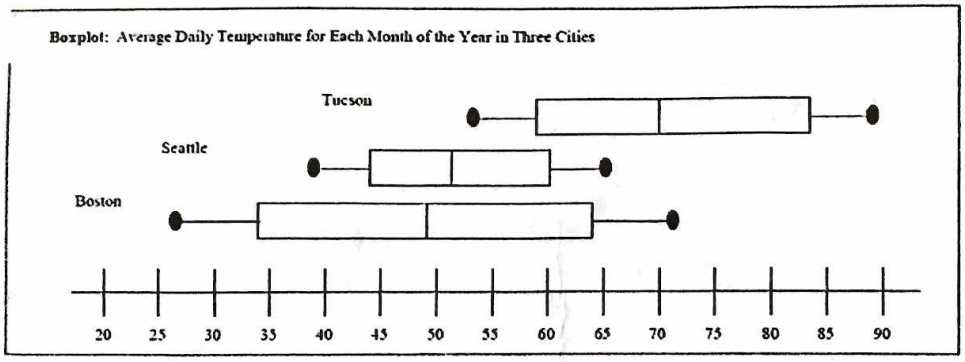
7. If each of the boys was taller by exactly one inch, what would the new mean be? (Do not redo calculations.)

41 inches 40 + 1 = 41

8. If each of the boys was taller by exactly one inch, what would happen to the standard deviation? Explain.

The standard deviation would not change since the points would be same distance from mean.

The box plots below show the average daily temperature (in degrees Fahrenheit) for each month of the year in three different cities.



9. Estimate Q1 for Seattle.

≈44°F

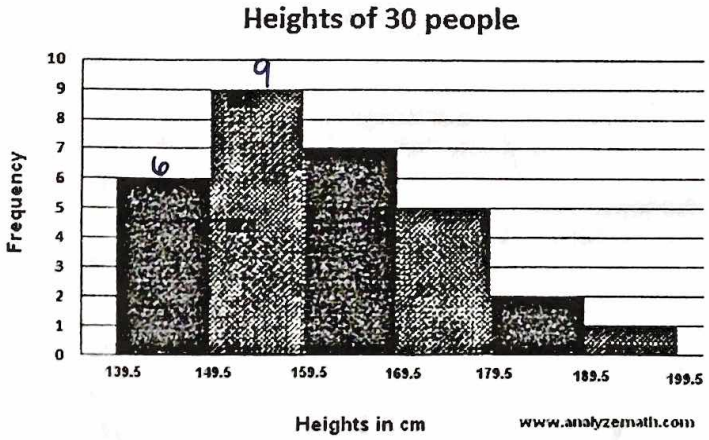
10. Estimate Q3 for Boston.

≈64°F

11. Your friend Max wants to move to one of these three cities and he prefers warm/hot weather. Which city would you recommend that he move to? Support your answer with statistics.

Max should move to Tucson since it has the highest median & max temperature.

The histogram below shows the heights of 30 people in cm.



12. How many people are between 179.5-189.5 cm?

2 people

13. How many people are shorter than 159.5 cm?

15 people

14. Is this distribution best described as symmetric, skewed left, or skewed right?

Skewed right

15. How many people are exactly 160 cm tall?

Cannot tell since histograms don't show exact data points.