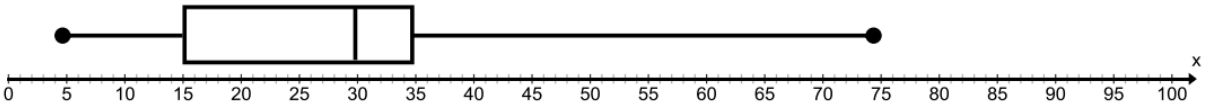
Name _____ Period _____

Statistics Study Guide



1. Median? 2. Range? GSE.SP.2

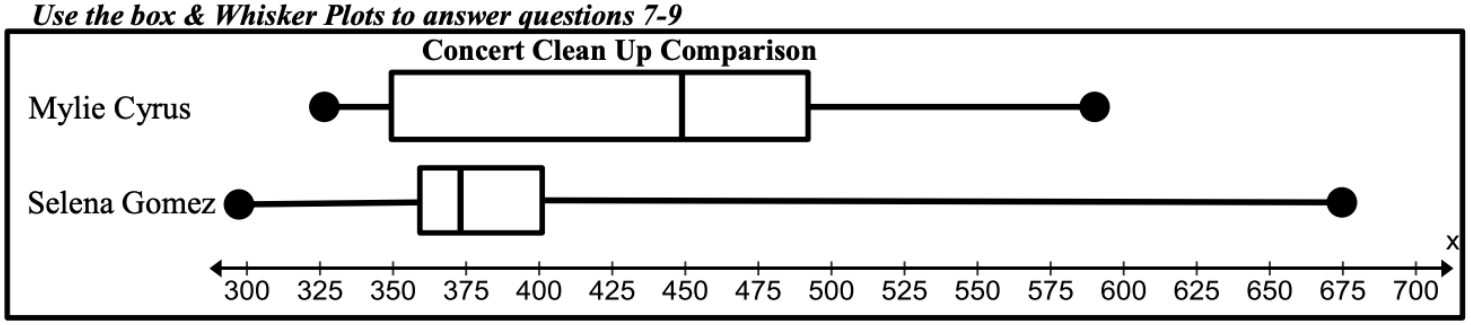
3. Given the following set of data, what is the range? (2, 23, 34, 74, 21, 8, 9, 65) GSE.SP.2

Decide if the scenarios are valid random samples. Then tell why or why not:

5. Survey every 10th person leaving a Dallas Cowboys game to find out what is the most popular football team in the USA. GSE.SP.1

6. Survey every 10th person at Walmart to find out which laundry detergent is most popular. GSE.SP.1

Use the box & Whisker Plots to answer questions 7-9



7. How much greater is the median cost of cleaning up after a Cyrus concert than a Gomez concert? GSE.SP.3

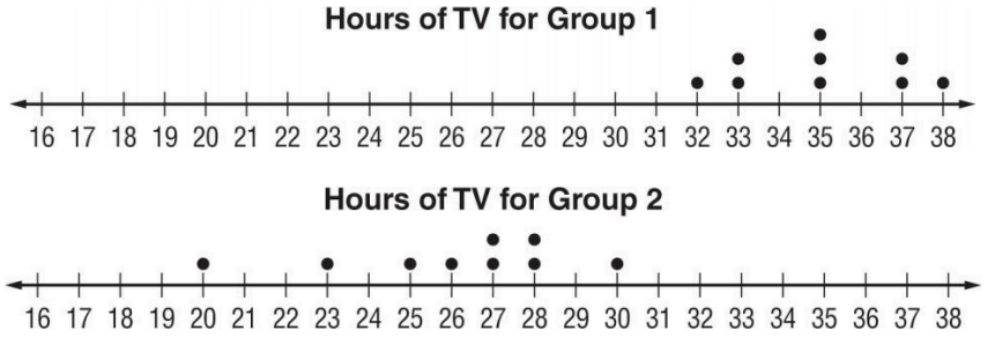
8. ´Which singer appear to have a more predictable cleanup cost? Explain why. GSE.SP.4

10. In which of the following cases would you survey a sample instead of the whole population? GSE.SP.1

A. China wants to know how many beds most families have in their homes.
B. You want to know how many kids in your class play soccer.
C. Grandma wants to know how many people are coming to dinner.
D. FOX wants to know how many people watched American Idol last night.

11. A new school wants to find out what colors they should choose for their school colors. Which of the following samples would best represent the whole school population? GSE.SP.1

A. Survey every tenth student as they leave Chorus practice.
B. At football practice, survey every third player as they take a water break.
C. Put all students' names in a hat and survey the first 100 pulled from the hat.



12. Find and compare the MEAN number of TV hours for group 1 and for group 2.

Group 1 = _____ Group 2 = ____

Group ____'s MEAN was _____ higher than Group _____'s. GSE.SP.4

13. Find and compare the MEDIANS for Group 1 _____ and for Group 2_____.

Group ____'s MEDIAN was _____ more hours of TV than Group _____'s. GSE.SP.4

Yummy Fruits got a shipment of 400 baskets of apples. They want to find out how many total apples were in the shipment but they didn't have the time to count all of them, so they counted the apples in some of the baskets and recorded it in the chart below.

Basket Code	A1	M1	X1	G2	Z2	S3	J4	Q5	P6	N7
# of Apples	23	29	34	33	22	38	28	27	36	35

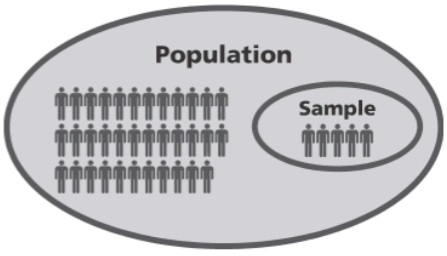
Use the random sample above to draw inferences:

16. How many apples are most likely to be in one basket? GSE.SP.2

17. How many apples did Yummy Fruits probably get in the shipment all together? GSE.SP.2

A population is the entire collection of people, items, or events that you want to study. A sample is a subset of people, items, or events from the larger population.

A representative sample of a population accurately reflects the characteristics or preferences of the entire population.



The band director asked 10 randomly selected band members whether they would prefer an extra rehearsal on Tuesday, Wednesday, or Thursday. Based on her sample, estimate how many of the 40 total band members would prefer to rehearse on Tuesday.

Tuesday	5
Wednesday	2
Thursday	3

5 of the 10 members in the sample prefer Tuesday.

$$\frac{5}{10} = \frac{x}{40}$$

$$\frac{5}{10} \cdot 40 = \frac{x}{40} \cdot 40$$

$$20 = x$$

Let x represent the number of the 40 total band members who prefer Tuesday.

Based on the sample, about 20 band members would be expected to prefer to have an extra rehearsal on Tuesday.