Name ANSWERS Date

15.5-15.+ Review

Tell whether the events are *independent* or *dependent*. Explain.

1) You spin a spinner twice.

First Spin: You spin a 2.
Second Spin: You spin an odd number.

independent; The second spin is not affected by the first spin.

2) Your committee is voting on the leadership team.

First Vote: You vote for a president.
Second Vote: You vote for a vice president.

dependent; One person cannot be both president and vice president.

You spin the spinner and flip a coin. Find the probability of the compound event.

3) Spinning an odd number and flipping heads

$\frac{3}{10}$

4) *Not* spinning a 5 and flipping tails

$\frac{2}{5}$

You randomly choose one of the tiles. Without replacing the first tile, you choose a second tile. Find the probability of the compound event.

5) Choosing a 6 and then a prime number

$\frac{2}{21}$

6) Choosing two odd numbers

$\frac{2}{7}$

You roll a number cube twice. Find the probability of the compound event.

7) Rolling two numbers whose sum is 2

$\frac{1}{36}$

8) Rolling an even number and then an odd number

$\frac{1}{4}$

Identify which one among the pair of groups is the population and which one is the sample.

10) All students in a school

30 students in the school

population: All students in a school;
sample: 30 students in a school

11) 75 strawberries in the field

All the strawberries in the field

population: All the strawberries in the field;
sample: 75 strawberries in the field

12) You want to know the number of students in your school who read some of the newspaper at least once a week. You survey 30 random students that you meet in the hallway between classes.

a) What is the population of your survey?

all the students in your school

b) What is the sample of your survey?

30 random students that you meet in the hallway between classes

c) Is the sample biased or unbiased? Explain.

unbiased; You are surveying at different times of the day and in the hallway rather than in your classrooms

For each problem, which sample is better for making a prediction? Explain.

13)

Predict the number of residents in St. Lucie County who own a home.	
Sample A	A random sample of 100 residents in the county
Sample B	A random sample of 100 residents in the city of Fort Pierce

sample A; surveyed the county, rather than just one city

14)

Predict the number of people at a beach who are wearing sunscreen.	
Sample A	A random sample of 50 people at the beach
Sample B	A random sample of 5 people at the beach

sample A; larger sample size

Determine whether you would survey the population or a sample. Explain.

15) You want to know the average weight of the members of your family.

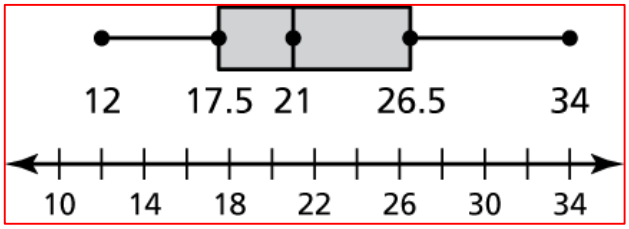
population; You have access to all of the members of your family.

16) You want to know the number of grocery stores in Florida that carry your favorite cereal.

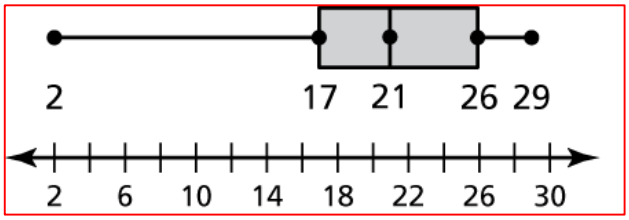
sample; It would not be easy to contact or visit every grocery store in the state of Florida.

Make a box-and-whisker plot for the data.

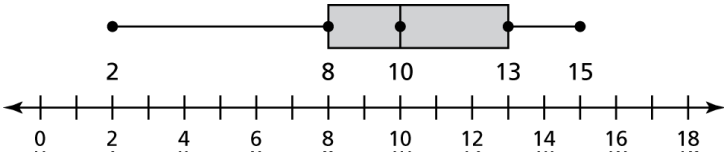
17) Miles per gallon: 18, 30, 24, 19, 22, 34, 13, 12, 20, 25, 28, 17



18) Numbers of take-out orders: 26, 2, 17, 25, 18, 20, 21, 15, 29, 27, 22



17) The box-and-whisker plot represents the numbers of cocoons in each butterfly tent.



a) What percent of the butterfly tents contain at most 10 cocoons?

50%

b) Are the data more spread out below the first quartile or above the third quartile? Explain.

below the first quartile; There is a greater difference between the minimum and Q1

c) Find and interpret the interquartile range of the data.

5; The middle 50% of the data have a range of 5

d) What are the most appropriate measures to describe the center and variation of the distribution?

median and IQR