Name _____

Date _____ Pd _____
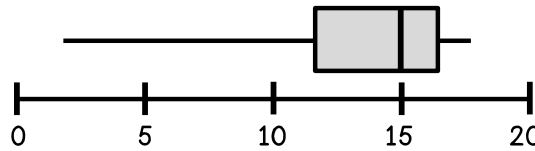
BOX PLOTS

BOX PLOTS

- A box plot displays data distribution using _____ key numbers. The difference between the first and third quartile is called the

  _____.

  - _____: the smallest piece of data
  - _____: the median of the lower half of data
  - _____: the median (midpoint) of the data
  - _____: the median of the upper half of data
  - _____: the largest piece of data

Use the data below to create a five-number summary and sketch a box plot.

1. The following data set represents the number of animal crackers in a snack-size box.

34, 50, 49, 47, 48, 45, 48

Min: _____

Q1: _____

Med: _____

Q3: _____

Max: _____

NUMBER OF ANIMAL CRACKERS

2. The following data set represents the number of hours a small candle will burn.
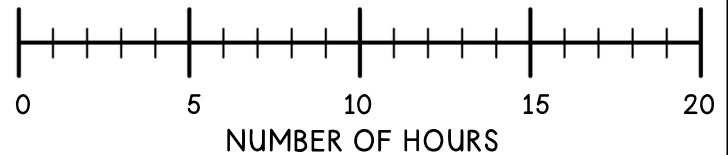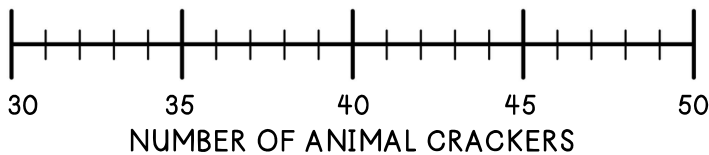
9, 7, 11, 16, 11, 19, 9, 10, 15, 14, 8, 12, 15

Min: _____

Q1: _____

Med: _____
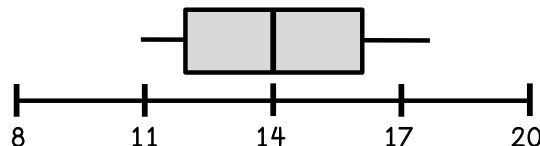
Q3: _____

Max: _____

NUMBER OF HOURS

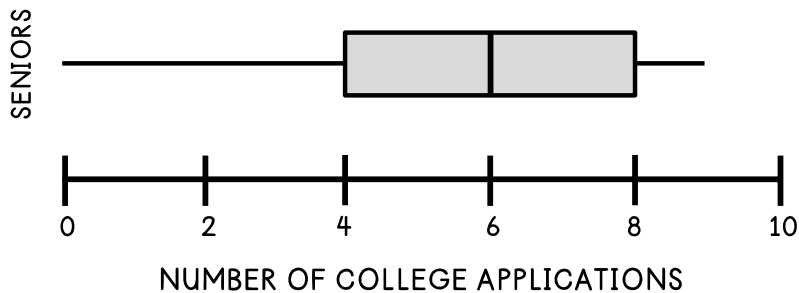**3.** Use the given box plot to determine the five-number summary.

Min: _____ Q1: _____ Med: _____ Q3: _____ Max: _____

Use your knowledge of box plots to answer the questions below.

Christina conducts a poll to determine the number of colleges high school seniors applied to. She creates a box plot to represent the information.

SENIORS

NUMBER OF COLLEGE APPLICATIONS

4. Determine the range of the number of colleges.	5. What is the median number of colleges applied to?
6. What is the interquartile range of the number of college applications?	7. Which quartile represents the greatest spread in data?

8. Describe why quartile 1 is larger than quartile 4. What do you observe about quartile 2 and 3?

_____

_____

_____

Use your knowledge of box plots to determine if the statements below are true or false.

9. The average monthly rainfall during the summer months and winter months are shown below.

WINTER

SUMMER

AVERAGE MONTHLY RAINFALL IN INCHES

_____ The range in rainfall in the winter was 12 inches.

_____ The median rainfall in the summer was 13 inches.

_____ For half of the months in the summer, the rainfall was greater than 11 inches.

_____ For half of the months in the winter, the rainfall was less than 10 inches.

Summarize today's lesson:

Name _____

Date _____ Pd _____

BOX PLOTS

Use your understanding of box plots to answer the questions below.

1. The local meteorologist plots the daily low temperatures for the months of January and February on the box plots below. Use the box plots to mark each statement as true or false, and correct any false statements.

JANUARY

TEMPERATURE (ºF)

FEBRUARY
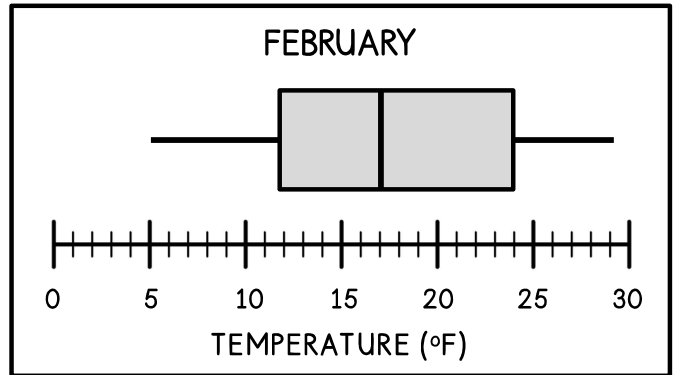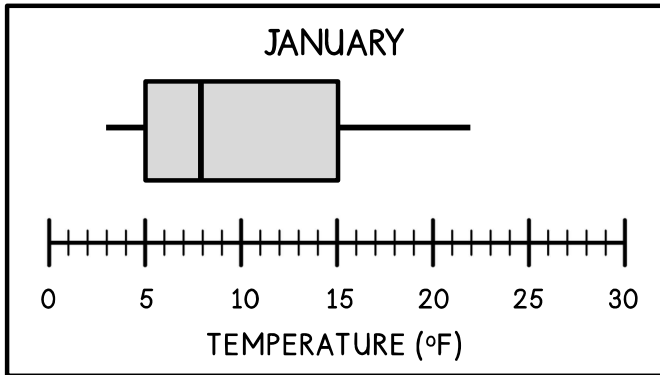
TEMPERATURE (ºF)

a. _____ The range of daily low temperatures in January was 15ºF.

b. _____ In February, about 50% of the daily low temperatures were 17ºF or higher.

c. _____ Less than 25% of the daily low temperatures in February were 25ºF or higher.

d. _____ In February, the IQR was 20ºF.

e. _____ The median daily low temperature in January was 15ºF.

f. _____ Three-fourths of the daily low temperatures in January were above 5ºF.

Using the data given below create a five-number summary and a box plot.

2. The following data set represents the number of fish crackers in a snack-size box.

34, 35, 37, 38, 42, 45, 49

Min: _____

Q1: _____

Med: _____

_____ Q3: _____

Max: _____

3. The following data set represents the number of hours various homes run their air conditioning in one day.

9, 6, 11, 16, 11, 19, 9, 10, 15, 14, 8, 12, 15

Min: _____

Q1: _____

Med: _____

_____ Q3: _____

Max: _____