

Show your work.

b. _____

b. The points scored by a basketball team are shown in the table. Find the five-number summary of the data.

Game	1	2	3	4	5	6	7	8	9
Number of Points	34	20	33	36	37	44	40	35	28

c. Draw a box plot of the data.

Q_1
 34.5
 Q_3
 42
 20 34 35 36 37 40 41 49 83
 min $\frac{34+35}{2}$ Points Scored $\frac{40+44}{2}$ Max



"Box + Whisker"

Guided Practice

Check

1. The points scored by each of seven basketball players is 12, 4, 18, 16, 21, 8, and 12. Find the mean, median, mode, and range of the data

Show your work.

set. (Example 1) **mean: 13; median: 12; mode: 12; range: 17**

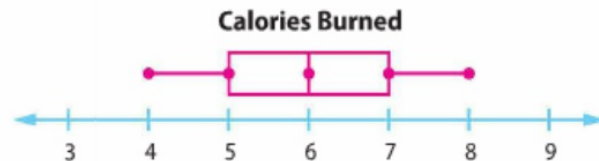
2. The data for Calories burned per minute of exercise is in the table. (Example 2)

Exercise	Jogging	Jumping Rope	Basketball	Soccer	Bicycling	Downhill Skiing	Walking
Calories Burned	8	7	7	6	5	5	4

- a. Find the five-number summary of the data. **minimum: 4; Q_1 : 5;**

median: 6; Q_3 : 7; maximum: 8

- b. Draw a box plot to represent the data.



3. **Building on the Essential Question** What does the length of the “whiskers” in a box plot say about the data?

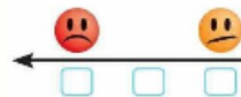
Sample answer: If the whiskers are long, the data are

spread out. If the whiskers are short, the data are

grouped more closely together.

Rate Yourself!

How confident are you finding the five-number summary? Color the box that applies.



For more help, go to [Personal Tutor](#)



Independent Practice

Go online for Step-by-Step Solutions



Find the mean, median, mode, and range of each data set.
Round to the nearest tenth if necessary. (Example 1)

1 Roller coaster speeds shown in the table at the right

mean: 103.1; median: 100; mode: 100; range: 46



2. Number of words in magazine articles: 115, 118, 115, 100, 97, 105

mean: 108.3; median: 110; mode: 115; range: 21

Fastest Roller Coasters	
Coaster	Speed (mph)
Dodonpa	107
Kingda Ka	128
Millennium Force	93
Phantom's Revenge	82
Steel Dragon 2000	95
Superman: The Escape	100
Top Thrill Dragster	120
Tower of Terror	100

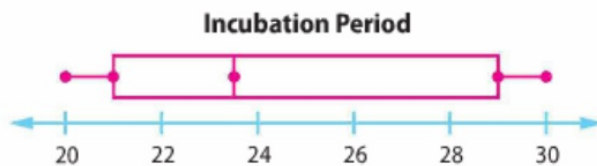
Find the five-number summary of each set of data. Then draw a box plot of the data. (Example 2)

3

Number of Days of Incubation Periods for Pet Birds	
Australian King Parrot	20
Glossy Cockatoo	30
Major Mitchell's Cockatoo	26
Princess Parrot	21
Red-Tailed Cockatoo	30
Red-Winged Parrot	21
Regent Parrot	21
Superb Parrot	20
White-Tailed Cockatoo	29
Yellow-Tailed Cockatoo	29

minimum: 20; Q_1 : 21; median: 23.5;

Q_3 : 29; maximum: 30

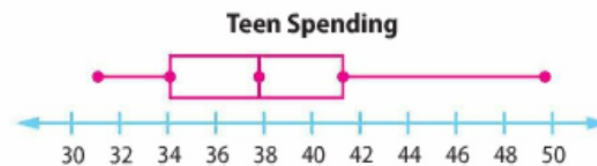


4.

Top Ten Countries Average Weekly Teen Spending	
Norway	\$49.70
Sweden	\$41.70
Brazil	\$41.30
Argentina	\$40.50
Hong Kong	\$38.00
United States	\$37.60
Denmark	\$37.40
Singapore	\$34.10
Greece	\$32.90
France	\$31.30

minimum: \$31.30; Q_1 : \$34.10; median:

\$37.80; Q_3 : \$41.30; maximum: \$49.70



5. **CCSS Multiple Representations** A restaurant conducted a survey asking its customers to rate the new menu using a scale of 1 to 20. The results of the survey are shown in the line plot.



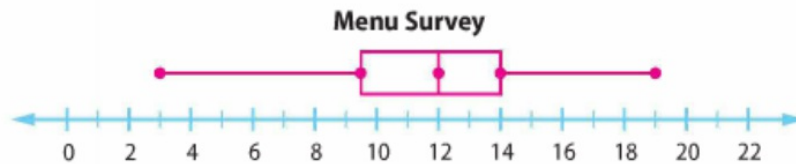
- a. **Numbers** Find the mean, median, mode, and range of the data set. Round to the nearest tenth if necessary.

mean: 11.6; median: 12; mode: 14; range: 16

- b. **Numbers** Find the five-number summary of the data set.

minimum: 3; Q_1 : 9.5; median: 12; Q_3 : 14; maximum: 19

- c. **Graphs** Draw a box plot to represent the set of data.





H.O.T. Problems Higher Order Thinking

6. **CCSS Reason Abstractly** Create a data set that contains 8 to 12 values such that the mean is greater than the median.

Sample answer: 8, 10, 12, 14, 16, 16, 18, 28

7. **CCSS Persevere with Problems** Create two different data sets that have the same median and same quartiles, but different ranges.

Sample answer: {1, 2, 5, 7, 9, 10, 12, 14, 15, 17, 22} and {0, 2, 5, 7, 9, 10, 12, 14, 15, 17, 27}

8. **CCSS Persevere with Problems** The ages of the students in a class at the community center are shown below.

25, 28, 36, 21, 28, 15, 24, 30

If the age of the teacher is added to the set of data, the mean age becomes 27. What is the age of the teacher? **36**
