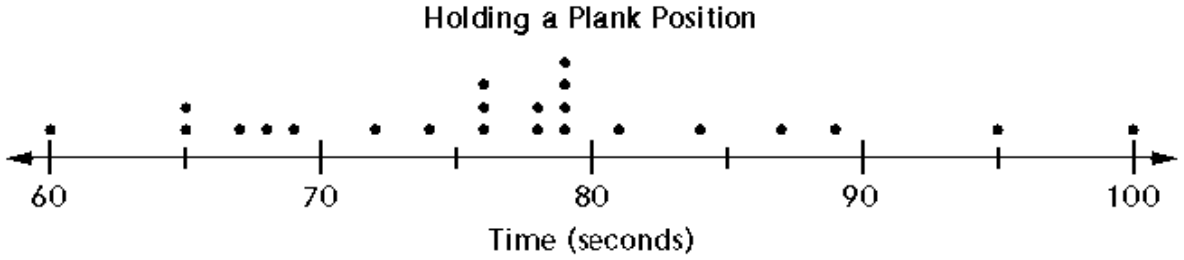
Introducing Box Plots

Lesson 3-12

DATE TIME

Math Message

The dot plot below shows how long Mr. Bard's sixth graders held the plank position in gym class.



1 **a.** Draw vertical line segments through the minimum and maximum on the dot plot.

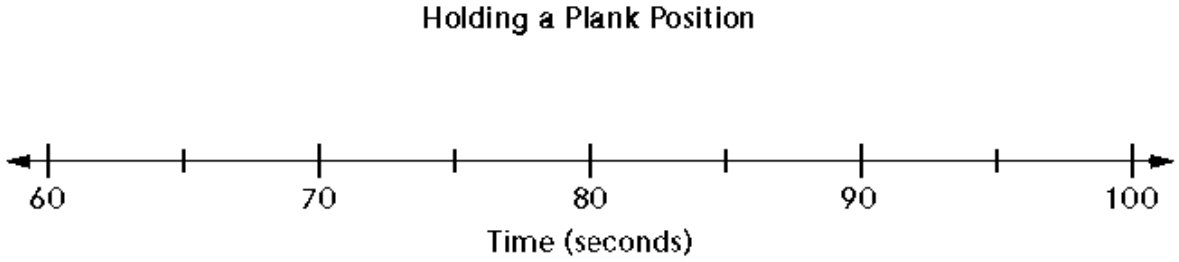
b. Draw a vertical line segment through the median to cut the data set in half.

c. Draw a vertical line segment through the median for the 11 data points below the class's median.

d. Draw a vertical line segment through the median for the 11 data points above the class's median.

e. List the numbers where your lines are drawn. _____

2 Use your five summary numbers from Problem 1 to create a **box plot.**



3 **a.** Which quartile has the greatest range? _____

b. Explain the relationship between range and the way the box plot is drawn.

_____

_____

_____

_____

Using Box Plots

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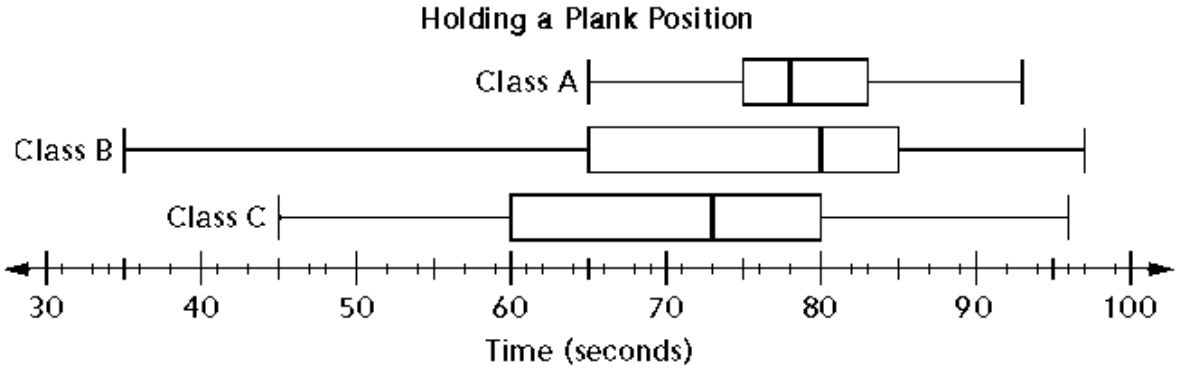
The box plots show lengths of time that students from three different classes can hold the plank position. Use the box plots to answer the questions below.



1. What is Q3 for Class A? _____

2. What is Q1 for Class B? _____

3. What is the range for Class C? _____

4. **a.** Which class has the greatest range of times? _____

   b. What does that tell you about the class? _____

5. **a.** In which class were the students' times closest to one another? _____

   b. Explain how you know. _____

6. **a.** Which class's students held the plank position longest? _____

   b. Explain your answer. _____

7. Which class has the most students? _____

Fraction Word Problems

Lesson 3-12

DATE TIME

1. Nicole has $1\frac{3}{4}$ pounds of grapes. She is splitting them into individual portions to pack in her family's lunches. How many $\frac{1}{4}$ pound portions of grapes can she make?

   Number model: _____ Solution: _____

2. Jeremy walks $2\frac{1}{2}$ miles each day. How far does he walk in a week?

   Number model: _____ Solution: _____

3. Fadia challenges George to see who can ride a bicycle the farthest in 30 minutes. Fadia rides $7\frac{1}{4}$ miles. George rides $7\frac{1}{10}$ miles. How much farther does Fadia ride?

   Number model: _____ Solution: _____

4. Selene practices the piano $\frac{3}{4}$ hour every day. How long does she practice in a week?

   Number model: _____ Solution: _____

5. Shutter speeds on cameras are measured in seconds and fractions of seconds. A speed of $\frac{1}{60}$ is faster than a speed of $\frac{1}{15}$. How many times faster is a shutter speed of $\frac{1}{60}$ than a shutter speed of $\frac{1}{15}$?

   Number model: _____ Solution: _____

6. Rhys is running a relay race. His team of 3 runners needs to cover a total distance of $1\frac{1}{4}$ miles. Each runner runs the same distance. How far does each of the 3 runners run?

   Number model: _____ Solution: _____

Math Boxes

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Math Boxes

1 Ian lives $16\frac{1}{2}$ miles from Zion National Park. His grandmother lives $\frac{3}{4}$ of the way to the park from Ian's home. How far from Ian does his grandmother live?

Number model: _____

Solution: _____

SRB 190-192

2 Which of the following numbers are equivalent to 1.02? Check all that apply.

- ☐ $1\frac{2}{10}$
- ☐ $\frac{102}{100}$
- ☐ 1.020
- ☐ $\frac{102}{1{,}000}$

SRB 56-58

3 Name two fractions between $\frac{6}{7}$ and $\frac{6}{8}$.

_____

SRB 170

4 To make light-green paint, Jason mixes 3 parts green paint to 2 parts white paint. If he has 7.5 cups of green paint, how much white paint does he need?

Solution: _____

SRB 43-48

5 The distances (in miles) that ten students travel to school are listed below. Find the range and median of their distances.

1, 5, 2, 4, 2, 8, 2, 4, 3, 7

Range: _____

Median: _____

SRB 285, 291

6 Find the least common multiple.

a. LCM (6, 7) = _____

b. LCM (5, 6) = _____

c. LCM (11, 9) = _____

d. LCM (8, 12) = _____

SRB 106