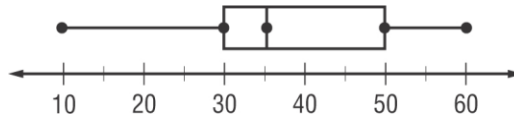


Reteach

Box Plots

A **box plot** is a diagram that is constructed using the median, quartiles, and extreme values. A box is drawn around the quartile values, and the whiskers extend from each quartile to the extreme values.



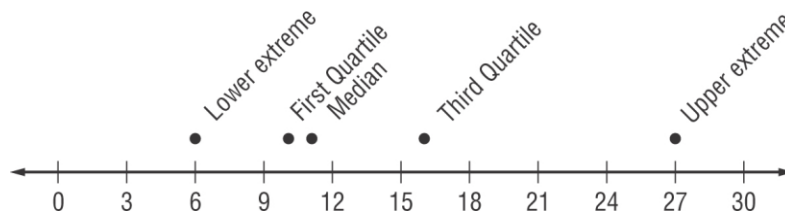
Example 1

The list below shows the number of model airplanes owned by the members of the aviation club. Draw a box plot of the data.

6, 8, 10, 10, 10, 11, 12, 14, 16, 18, 27

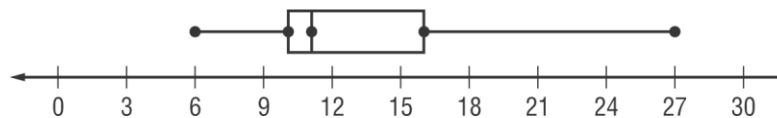
Step 1 Order the numbers from least to greatest. Then draw a number line that covers the range of the data.

Step 2 Find the median, the extremes, and the first and third quartiles. Mark these points above the number line.



Step 3 Draw the box so that it includes the quartile values. Draw a vertical line through the median value. Extend the whiskers from each quartile to the extreme data points.

Numbers of Model Airplanes Owned



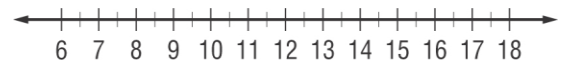
Exercises

Draw a box plot for each set of data.

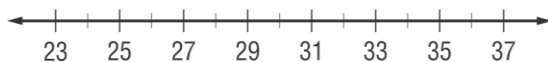
1. {4, 7, 5, 3, 12, 6, 5}



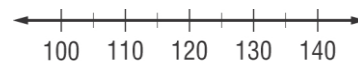
2. {13, 8, 17, 10, 6, 11, 18}



3. {23, 36, 28, 34, 30, 29, 30, 28, 34}



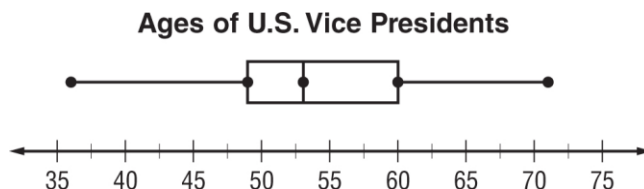
4. {108, 130, 110, 104, 106, 120, 140, 122, 114, 104}



Problem-Solving Practice

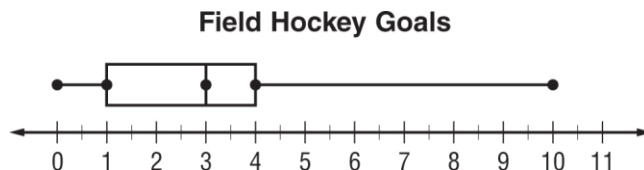
Box Plots

U.S. VICE PRESIDENTS Use the box plot that shows the ages of U.S. vice presidents when they took office.



- | | |
|---|---|
| 1. Describe the distribution of the data. What can you say about the ages of U.S. vice presidents? | 2. What percent of U.S. vice presidents were at least 60 years old when they took office? Explain how you found your answer. |
| 3. What percent of U.S. vice presidents were between the ages of 49 and 60 when they took office? Explain how you found your answer. | 4. Can you determine from the box plot whether there are any U.S. vice presidents who took office at exactly age 55 years of age? Explain. |

FIELD HOCKEY Use the box plot that shows the number of goals made by members of the field hockey team during the season.



- | | |
|---|---|
| 5. Describe the distribution of the data. What can you say about the number of goals made by the members of the field hockey team? | 6. What percent of team members scored between 1 and 3 goals this season? Explain. |
|---|---|