Answers and talk notes

Represent and Describe Data in a Box Plot

What your student is learning

Tonight we build a box plot, a simple picture that shows how data is spread out using five key numbers.

Answers

Ask your student to explain before you look.

1. **A.** Least, Q1, median, Q3, greatest. The five numbers are the least, Q1, the median, Q3, and the greatest. So the answer is: Least, Q1, median, Q3, greatest.
2. **C.** The median. The line inside the box marks the median. So the answer is: The median.
3. **D.** The middle half. The box runs from Q1 to Q3, which holds the middle half of the data. So the answer is: The middle half.
4. **A.** 3. The median is 7. The lower half is 1, 3, 5, and its middle is 3, so Q1 = 3.
5. **B.** 16. The median is 12. The upper half is 14, 16, 18, and its middle is 16, so Q3 = 16.
6. **A.** 4, 5, 8, 12, 15. Least 4, median 8 (the 4th value), Q1 = 5 (middle of 4, 5, 7), Q3 = 12 (middle of 10, 12, 15), greatest 15: 4, 5, 8, 12, 15.

Talk about it

Is the median halfway between the two ends, or the middle score in order?

Home mission

Pick five snack prices from a store flyer. Say them in order out loud. Can your student name the median, then the lowest and the highest?

When they are stuck, ask

- Did we put the numbers in order first?
- What is the median? That splits the data into two halves.
- What is the middle of the lower half, and of the upper half?

Try not to say

- You can find the quartiles without ordering the numbers first.
- The box shows all of the data, not just the middle half.
- The line inside the box is the mean.