

Finding IQR when you have odd set of numbers

Steps:

Sample question: Find the IQR for the following data set: 1, 2, 5, 6, 7, 9, 12, 15, 18, 19, 27.

- **Step 1: Put the numbers in order.**
1, 2, 5, 6, 7, 9, 12, 15, 18, 19, 27.
- **Step 2: Find the median.**
1, 2, 5, 6, 7, **9**, 12, 15, 18, 19, 27.
- **Step 3: Place parentheses around the numbers above and below the median.**
Not necessary **statistically**, but it makes Q1 and Q3 easier to spot.
(1, 2, 5, 6, 7), 9, (12, 15, 18, 19, 27).
- **Step 4: Find Q1 and Q3**
Think of Q1 as a median in the lower half of the data and think of Q3 as a median for the upper half of data.
(1, 2, **5**, 6, 7), **9**, (12, 15, **18**, 19, 27). Q1 = 5 and Q3 = 18.
- **Step 5: Subtract Q1 from Q3 to find the interquartile range.**
 $18 - 5 = 13$.

Finding IQR when you have even set of numbers

Sample question: Find the IQR for the following data set: 3, 5, 7, 8, 9, 11, 15, 16, 20, 21.

- **Step 1: Put the numbers in order.**
3, 5, 7, 8, 9, 11, 15, 16, 20, 21.
- **Step 2: Make a mark in the center of the data:**
3, 5, 7, 8, 9, | 11, 15, 16, 20, 21.
- **Step 3: Place parentheses around the numbers above and below the mark you made in Step 2—it makes Q1 and Q3 easier to spot.**
(3, 5, 7, 8, 9), | (11, 15, 16, 20, 21).
- **Step 4: Find Q1 and Q3**
Q1 is the median (the middle) of the lower half of the data, and Q3 is the median (the middle) of the upper half of the data.
(3, 5, **7**, 8, 9), | (11, 15, **16**, 20, 21). Q1 = 7 and Q3 = 16.
- **Step 5: Subtract Q1 from Q3.**
 $16 - 7 = 9$.
This is your IQR.