

Q7 17 21 17 18 17 19 18 17 63

$$\text{mean} = \frac{17+21+17+18+17+19+18+17+63}{9} = \frac{207}{9} = \boxed{23}$$

median: 17 17 17 17 18 18 19 21 63  
 ↑  
 Median

std dev:

$$17^2 + 21^2 + 17^2 + 18^2 + 17^2 + 19^2 + 18^2 + 17^2 + 63^2 = 6575$$

$$\Rightarrow s^2 = \frac{6575 - 9(23)^2}{8} = \frac{6575 - 4761}{8} = 226.75$$

$$S = \sqrt{226.75} = \boxed{15.05}$$

Remove the largest value:

17 17 17 17 18 18 19 21

$$\text{mean} = \frac{144}{8} = 18$$

$$\text{median} = \frac{17+18}{2} = 17.5$$

mean  
 ↓  
 17 17 17 17 18 18 19 21  
 ↑  
 median

normal distribution!

Previously (with large value: 63)

17 17 17 17 18 18 19 21  
 ↑  
 median

mean  
 ↓  
 63 ← pulling the mean up.

In this case - which is a better way of measuring the central tendency of the data set?