

Questions

**Practice examples on mean, median and mode:**

(1) The following table shows the heights in cm of two groups of people, group A and group B

Group A	160	160	160	175	180	170	160	165	155
Group B	180	160	230	160	170	165	125	150	145

- (i) For each of the groups find the mean, median and mode in terms of height.
- (ii) If the tallest person in group B was to stand in group A, how would the mean be affected? Predict your answer and then confirm by calculation.
- (iii) If the tallest person in Group B was to stand in group A, how would the median be affected? Predict your answer and then confirm by calculation.
- (iv) If the tallest person in Group B was to stand in group A, how would the modal height be affected? Predict your answer and confirm by calculation.
- (v) What can you say in general about the way in which the mean, median, and mode are affected by extreme values.

Answers:

- (i) Group A mean= 165cm    median= 160cm    mode=160cm  
Group B mean= 165cm    median= 160cm    mode= 160cm
- (ii) The mean of Group A would increase to 171.5cm
- (iii) The median increased slightly to 162.5cm
- (iv) The mode did not change. The modal height remained 160cm
- (v) In general the mean is affected the most by extreme values, the median is affected to a lesser extent and the mode is not affected by extreme values.

<http://library.med.utah.edu/WebPath/TUTORIAL/BIOSTATS/BIOSTATS.html> accessed on 23 June 2014

On the above website we recommend that you read the sections on

- Statistical Studies in Populations
- Distribution and Central Tendency
- Measurement of Variability