

Lesson 2 Which Measure of Central Tendency

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Recall: Mean, median and mode are measures of central tendency or values that represent the centre of a set of data.

Which central of tendency should be used to best represent the centre of the data?

In general:

The **mean** is used if there are no extreme outliers.

Outliers are values that do not reflect the typical data in a set. ie. much greater or smaller than the other values in a set of data.

The **median** is used if there are extreme outliers.

The **mode** is used for data gathered from surveys or tallies.

Example 1

Determine which measure of central tendency would be best to use in each of the following.

- a.) Scores on a test where all marks were between 45 and 93.

mean, no outliers

- b.) Scores on a test where two people received a mark of 0 for cheating.

median, outliers of 0

- c.) Ages of players on an adult recreational hockey team.

mode, categories

Example 2

Maddi scored 7, 9, 5, 3, 15 and 15 points in 6 of her basketball games.

a.) Which measure of central tendency best represents her average number of points per game?

mean

$$\frac{54}{6} = 9$$

median → outliers

~~3, 5, 7, 9, 15, 15~~
8

mode

15

b.) Which measure of central tendency would Maddi use if she was trying to impress scouts?

Mode, because it's the highest value.

Hints

$$\#2) \frac{84 + 65 + 76 + 4^{\text{th}} \text{ test mark}}{4} = 80$$

3) use tally in the chart

#5) b) Double original numbers

c) Add 3 to original numbers