



11 - Averages and Range

Types of data:

Qualitative: Data which is descriptive, uses words not numbers. E.g: Green, blue, orange.

Quantitative: Measures quantities using numbers. E.g: Shoe sizes, Heights.

Continuous: Data that can take any numerical value in a range. E.g: Time, Weight, Distance, Money

Discrete: Data which can only take specific values. E.g: Rolling a dice, flipping a coin.

Mean, Median, Mode and Range:

5, 3, 9, 1, 3, 2, 7, 2, 3

Median: The middle value when values are in numerical order:

1, 2, 2, 3, 3, 3, 5, 7, 9

If there are an even number of pieces of data, then the median will be the **MIDPOINT** of the two middle pieces of data:

2, 3, 5, 7, 9, 10 Midpoint of 5 and 7 = 6

Mode: Most frequent piece* of unique data:

1, 2, 2, 3, 3, 3, 5, 7, 9

*You can have more than 1 mode.

Mean: Sum of data ÷ Total pieces of data.

$(5+3+9+1+3+2+7+2+3) \div 9 = \underline{3.9}$ (to 1dp)

Range: Difference between the biggest and smallest

$9 - 1 = \underline{8}$

Linked Prior Topics:

- Basic calculations
- (+, -, ×, ÷)
- Ordering numbers.

Vocabulary:

Averages, Data, Discrete, Continuous, Qualitative, Mode, Mean, Median, Range, Stem and Leaf.

Linked Future Topics:

(Grouped) Frequency tables, Cumulative frequency, frequency polygons, box plots, histograms.