BGE Skills Workshop

Averages (mean)

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- Averages are used throughout science. It is good practice to repeat experiments as this will give more **Reliable** results by mitigating any variations within results, as experiments can never be exactly replicated.

- By taking your results and calculating an average value will meet this requirement.

Averages (mean)

- There are 2 key steps in order to calculate and average.

  1. Add up all your results

  2. Divide by the number of results

- These questions will be marked out of 2. 1 mark is for showing working for each of these steps. This can be done in different ways as the examples show. The second mark is for a correct answer including a unit if required (s for seconds, m for metres etc.).

Averages (mean): Example 1

- *The shoe sizes of a class of pupils is listed below*
  1,3,5,7,3,5
  Calculate and average shoe size for the class

1. Add results together   1+3+5+7+3+5 = 24

2. Divide by number of results   24 ÷ 6 = **4**

Averages (mean): Example 2

- *The results from an experiment are given in the following table*

Attempt	1	2	3	4	5	6	7	8	9	10
Time (s)	13	14	12	9	12	13	17	13	12	15

Calculate the average time.

$$\frac{13 + 14 + 12 + 9 + 12 + 13 + 17 + 13 + 12 + 15}{10} = \frac{130}{10} = 13s$$