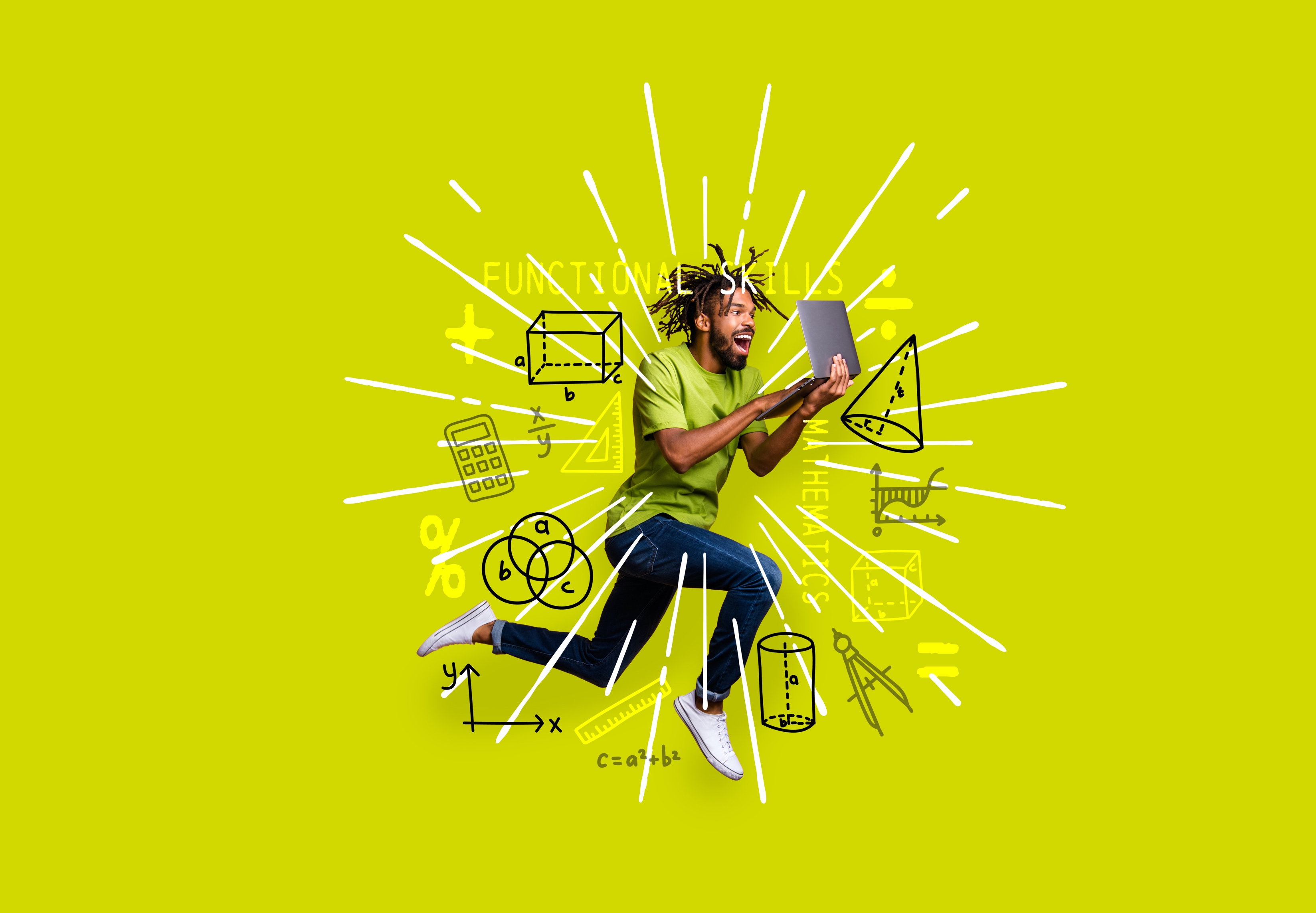
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**FUNCTIONAL SKILLS**

Maths Level 2



**Calculating the mean**

The mean is a type of average. An average is a number that gives an overview of collected data. The mean can be calculated in 2 steps.

1. Add up all the numbers in the data set
2. Divide the total by how many numbers there are

**Use the steps provided to work out the answers to the following questions.**

**Question 1**

Alex rolls a die. Here are their results:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 3 | 4 | 1 | 3 | 5 | 2 | 2 |

Calculate the mean.

(Show your working out)

|  |
| --- |
|  |

**Question 2**

The table shows the times individuals took to run 100m.

What is the mean time taken?

|  |  |
| --- | --- |
| **Runner** | **Time (seconds)** |
| Jo | 19.6 |
| Jamie | 30.1 |
| Alex | 21.5 |
| Sam | 20.8 |
| Max | 24.5 |

(Show your working out)

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| --- |
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**Question 3**

10 students sit the same maths exam. Their results are shown in the table below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 23 | 17 | 28 | 21 | 19 |
| 12 | 30 | 18 | 24 | 25 |

Calculate the mean exam score.

(Show your working out)

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**Question 3b**

Round your answer to the nearest whole number.

(Show your working out)

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| --- |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Grouped frequency**  Grouped frequency is a method of organising and presenting data. It groups values into intervals or ranges. These groups do not overlap.   |  |  | | --- | --- | | **Height (inches)** | **Frequency** | | 60 < H ≤ 65 | 4 | | 65 < H ≤ 70 | 12 | | 70 < H ≤ 75 | 8 |   To calculate the mean of grouped frequency:   * find the midpoint, or mid-range, of each group * work out the frequency x midpoint * calculate the total frequency * work out the mean |

**Question 4a**

Using the information in the grouped frequency table, calculate the mean height.

|  |  |  |  |
| --- | --- | --- | --- |
| **Height (inches)** | **Frequency** | **Midpoint** | **Frequency x midpoint** |
| 60 < H ≤ 65 | 7 |  |  |
| 65 < H ≤ 70 | 10 |  |  |
| 70 < H ≤ 75 | 5 |  |  |
| 75 < H ≤ 80 | 2 |  |  |

(Show your working out)

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**Question 4b**

Round your answer to the nearest whole number.

(Show your working out)

|  |
| --- |
|  |

**Exam-style question 1**

You want to find out the mean number of guests who have attended your events throughout the past year.

|  |  |
| --- | --- |
| **Number of guests** | **Frequency** |
| 0 < N ≤ 100 | 38 |
| 100 < N ≤ 200 | 71 |
| 200 < N ≤ 300 | 56 |
| 300 < N ≤ 400 | 24 |
| 400 < N ≤ 500 | 9 |

Estimate the mean number of guests.

Round your answer to the nearest whole number.

(Show your working out)

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| --- |
|  |

**Exam-style question 2**

You want to find out the mean speed of vehicles travelling past the local school in the village. A camera records different cars’ speeds from 3pm to 4pm. The results are shown below:

|  |  |
| --- | --- |
| **Speed (*S*) in miles per hour (mph)** | **Frequency**  **(No. of cars)** |
| 10 < N ≤ 15 | 7 |
| 15 < N ≤ 20 | 16 |
| 20 < N ≤ 25 | 21 |
| 25 < N ≤ 30 | 14 |
| 30 < N ≤ 35 | 2 |

(Show your working out)

|  |
| --- |
|  |