# Mean from a frequency table

Maths

Miss Davies

# Mean from a frequency table

1. The ages of people in a drama club are recorded in the table in the below.

| Age | Frequency |
|-----|-----------|
| 8 | 4 |
| 9 | 7 |
| 10 | 9 |
| 11 | 14 |
| 12 | 10 |
| 13 | 7 |
| 14 | 5 |
| 15 | 4 |

Calculate the mean age of the drama club.

2. A teacher records time spent, in hours, on coursework for two groups X and Y.

Group X

| Time (H) | Frequency |
|----------|-----------|
| 5 | 3 |
| 6 | 4 |
| 7 | 5 |
| 8 | 2 |
| 9 | 1 |
| 10 | 1 |

Group Y

| Time (H) | Frequency |
|----------|-----------|
| 5 | 0 |
| 6 | 4 |
| 7 | 6 |
| 8 | 2 |
| 9 | 1 |
| 10 | 0 |

Calculate the mean to decide which group of students has spent the least amount of time on their coursework.

# Mean from a frequency table

3. The sizes of trainers sold in a shop in one week are recorded. Marcus is calculating the mean size sold.

| Size | Frequency | |
|---|---|---|
| 5 | 3 | 15 |
| 6 | 5 | 30 |
| 7 | 5 | 35 |
| 8 | 8 | 64 |
| 9 | 9 | 81 |
| 10 | 15 | 150 |
| 11 | 5 | 55 |
| | | |
| 56 | | 430 |

Mean = 430 ÷ 56   Mean = 7.7

What mistake has Marcus made?

4. The time take to run a race are recorded to the nearest second.
a) Complete the missing values in the table.

| Time (sec) | Frequency | |
|---|---|---|
| | 4 | 60 |
| 16 | | 64 |
| 17 | 5 | |
| 18 | 10 | |
| 19 | | 0 |
| 20 | 2 | |
| | 25 | |

b) What is the mean time taken?

3

# Answers

# Mean from a frequency table

1. The ages of people in a drama club are recorded in the table in the below.

| Age | Frequency | |
|---|---|---|
| 8 | 4 | 32 |
| 9 | 7 | 63 |
| 10 | 9 | 90 |
| 11 | 14 | 154 |
| 12 | 10 | 120 |
| 13 | 7 | 91 |
| 14 | 5 | 70 |
| 15 | 4 | 60 |
| | 60 | 680 |

Calculate the mean age of the drama club.

$680 \div 60 = 11.3$

2. A teacher records time spent, in hours, on coursework for two groups X and Y.

Group X

| Time (H) | Freq | Time x Freq |
|---|---|---|
| 5 | 3 | 15 |
| 6 | 4 | 24 |
| 7 | 5 | 35 |
| 8 | 2 | 16 |
| 9 | 1 | 9 |
| 10 | 1 | 10 |
| | 16 | 109 |

Group Y

| Time (H) | Freq | Time x Freq |
|---|---|---|
| 5 | 0 | 0 |
| 6 | 4 | 24 |
| 7 | 6 | 42 |
| 8 | 2 | 16 |
| 9 | 1 | 9 |
| 10 | 0 | 0 |
| | 13 | 91 |

Calculate the mean to decide which group of students has spent the least amount of time on their coursework.

**X = 6.8 hours** and Y = 7 hours

# Mean from a frequency table

3. The sizes of trainers sold in a shop in one week are recorded. Marcus is calculating the mean size sold.

| Size | Frequency | |
|---|---|---|
| 5 | 3 | 15 |
| 6 | 5 | 30 |
| 7 | 5 | 35 |
| 8 | 8 | 64 |
| 9 | 9 | 81 |
| 10 | 15 | 150 |
| 11 | 5 | 55 |
| | | |
| 56 | | 430 |

Mean = 430 ÷ 56   Mean = 7.7

What mistake has Marcus made?

He didn't divide by the sum of frequency.

4. The time take to run a race are recorded to the nearest second.
a) Complete the missing values in the table.

| Time (sec) | Frequency | |
|---|---|---|
| 15 | 4 | 60 |
| 16 | 4 | 64 |
| 17 | 5 | 85 |
| 18 | 10 | 180 |
| 19 | 0 | 0 |
| 20 | 2 | 40 |
| | 25 | 429 |

b) What is the mean time taken?

17.16 seconds