Estimated Mean

Study Development Quick Guide

1. Add another column to the given table. Calculate the midpoint of each class interval- This can be done by adding the highest and lowest value of the interval and then dividing that by 2.

|  |  |  |
| --- | --- | --- |
| **Km travelled to work** | **Frequency** | **Midpoint** |
| 0Km $\leq $ x < 5Km | 6 | 2.5Km |
| 5Km $\leq $ x < 10Km | 4 | 7.5Km |
| 10Km $\leq $ x < 20Km | 1 | 15Km |

1. Add another column to the table. In this one, calculate midpoint multiplied by frequency.

|  |  |  |  |
| --- | --- | --- | --- |
| **Km travelled to work** | **Frequency** | **Midpoint** | **Midpoint x frequency** |
| 0Km $\leq $ x < 5Km | 6 | 2.5Km | 6 x 2.5 = 15Km |
| 5Km $\leq $ x < 10Km | 4 | 7.5Km | 30Km |
| 10Km $\leq $ time < 20Km | 1 | 15Km | 15Km |

1. Calculate the total of the frequency column, and the total of the midpoint $×$ frequency column.

|  |  |  |  |
| --- | --- | --- | --- |
| **Km travelled to work** | **Frequency** | **Midpoint** | **Midpoint x frequency** |
| 0Km $\leq $ x < 5Km | 6 | 2.5Km | 6 x 2.5 = 15Km |
| 5Km $\leq $ x < 10Km | 4 | 7.5Km | 30Km |
| 10Km $\leq $ time < 20Km | 1 | 15Km | 15Km |
|  | 11 |  | 60Km |

1. Divide the total of the midpoint $×$ frequency column by the total of the frequency column. This gives you the estimated mean.

60Km ÷ 11 = 5.45Km

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**Support**: Study Development offers workshops, short courses, 1 to 1 and small group tutorials.

* Join a tutorial or workshop on the [Study Development tutorial and workshop webpage](https://www.yorksj.ac.uk/students/study-skills/study-development-tutorials/) or search ‘YSJ study development tutorials.’
* Access our Study Success resources on the [Study Success webpage](https://www.yorksj.ac.uk/students/study-skills/study-success/) or search ‘YSJ study success.’