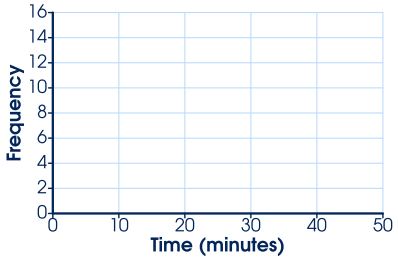
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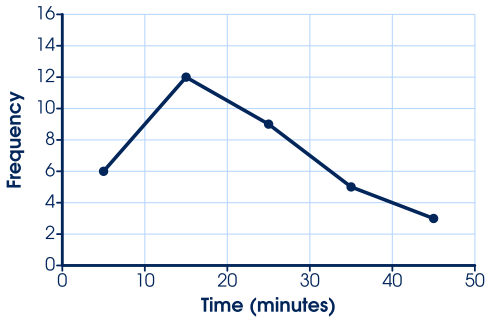
Frequency polygons

1 Draw a frequency polygon for this data.

Group	Frequency
$0 \leq x < 10$	4
$10 \leq x < 20$	9
$20 \leq x < 30$	14
$30 \leq x < 40$	8
$40 \leq x < 50$	5



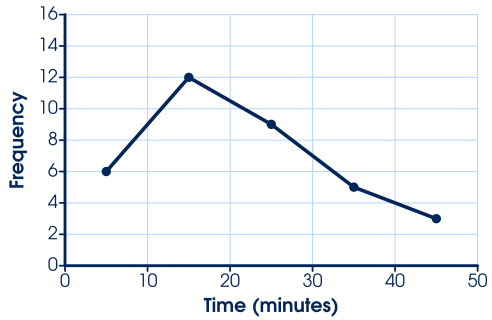
2 The frequency polygon shows some data.



Write down the modal class.

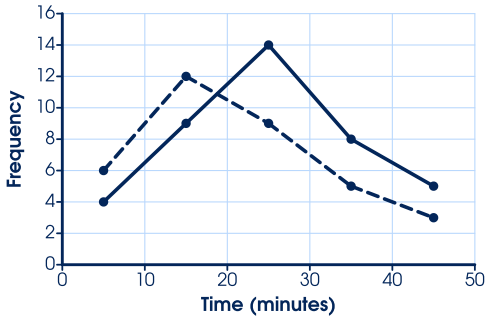
3 Explain why the points of a frequency polygon are plotted at the midpoints of the groups.

4 The frequency polygon shows some data.



Show that the total frequency is 35.

5 The frequency polygons compare two groups, A (solid) and B (dashed).



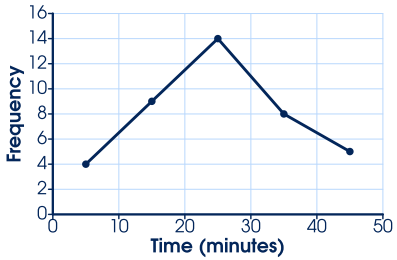
Compare the two groups.

6 The table shows some data.

Group	Frequency
$0 \leq x < 10$	4
$10 \leq x < 20$	9
$20 \leq x < 30$	14
$30 \leq x < 40$	8
$40 \leq x < 50$	5

Work out an estimate for the mean.

1



Plot at the midpoints and join with straight lines.

2 The highest point is at 15.

Modal class: **$10 \leq x < 20$**

3 We do not know the exact values in each group.

The midpoint is used to represent all the values in that group.

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Frequency polygons

4 6 + 12 + 9 + 5 + 3 = **35** ✓

5 Estimated means: A ≈ 25.2, B ≈ 21.3

Group **A** tends to have higher values.

6 Midpoints × frequency:

5×4 + 15×9 + 25×14 + 35×8 + 45×5

= 1010

1010 ÷ 40 = **25.25**

Mr&Mrs MATHS