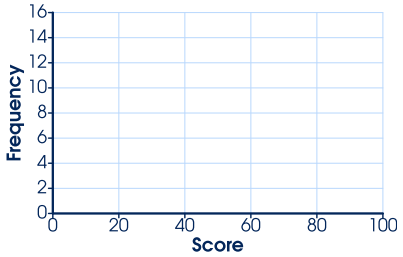
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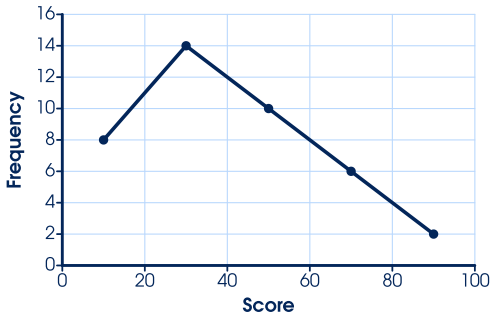
Frequency polygons

1 Draw a frequency polygon for this data.

Group	Frequency
$0 \leq x < 20$	5
$20 \leq x < 40$	12
$40 \leq x < 60$	15
$60 \leq x < 80$	10
$80 \leq x < 100$	6



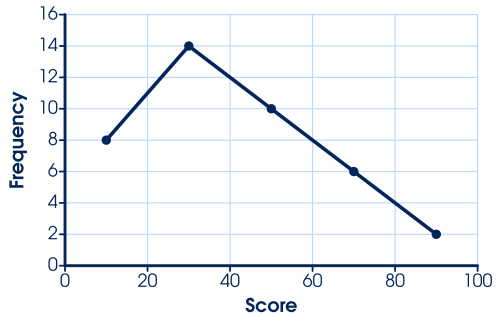
2 The frequency polygon shows some data.



Write down the modal class.

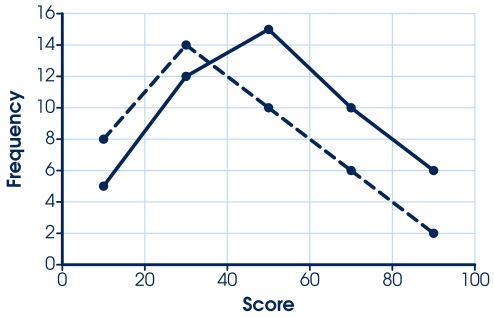
3 Explain why the points of a frequency polygon are plotted at the midpoints of the groups.

4 The frequency polygon shows some data.



Show that the total frequency is 40.

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



Compare the two groups.

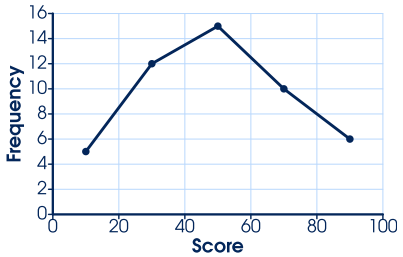
6 The table shows some data.

Group	Frequency
$0 \leq x < 20$	5
$20 \leq x < 40$	12
$40 \leq x < 60$	15
$60 \leq x < 80$	10
$80 \leq x < 100$	6

Work out an estimate for the mean.

Mr&Mrs MATHS

1



Plot at the midpoints and join with straight lines.

2 The highest point is at 30.

Modal class: **$20 \leq x < 40$**

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 8 + 14 + 10 + 6 + 2 = **40** ✓

5 Estimated means: A ≈ 50, B ≈ 40

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

6 Midpoints × frequency:
10×5 + 30×12 + 50×15 + 70×10 + 90×6

= 2400

2400 ÷ 48 = **50**