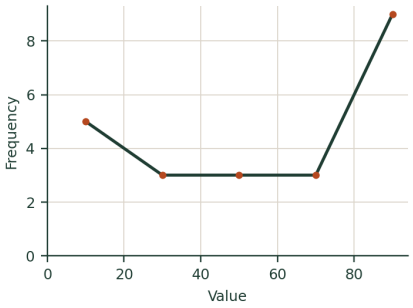
Frequency Polygons

Grade 2 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (30 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 50 marks.

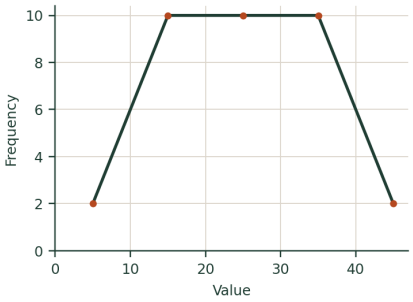
Warm-up

1 The frequency polygon shows the grouped data. Which class has frequency 5? **[1 mark]**



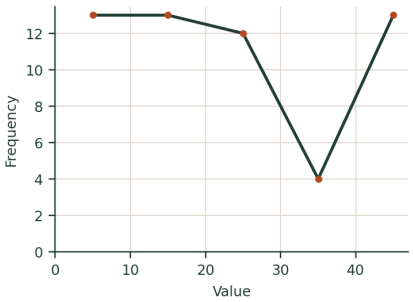
Answer _____

2 The frequency polygon shows the grouped data. What is the highest frequency? **[1 mark]**



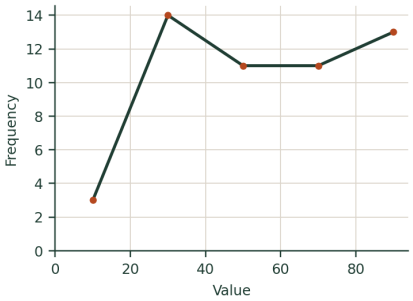
Answer _____

3 The frequency polygon shows the grouped data. What is the lowest frequency? **[1 mark]**



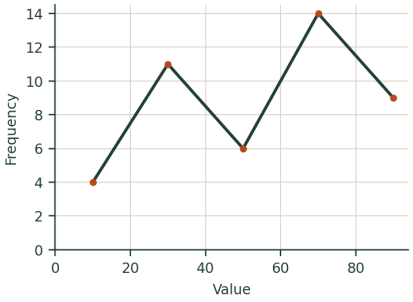
Answer _____

4 The frequency polygon shows the grouped data. Which is the modal class? **[1 mark]**



Answer _____

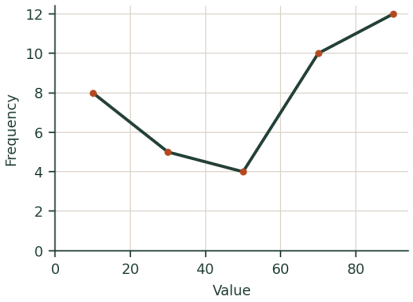
5 The frequency polygon shows the grouped data. How many values are in the first class? **[1 mark]**



Answer _____

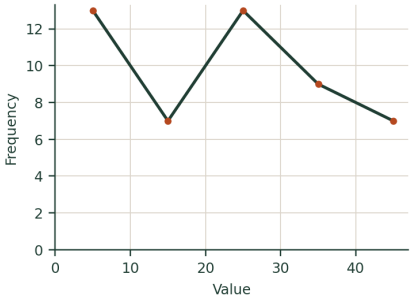
Core

6 The frequency polygon shows the grouped data. How many values are there altogether? **[2 marks]**



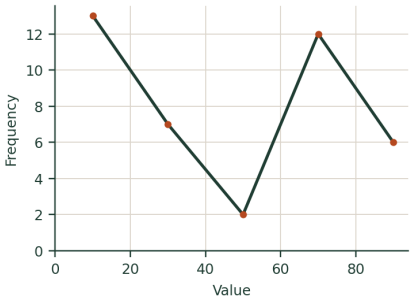
Answer _____

7 The frequency polygon shows the grouped data. How many values are in the last two classes? **[2 marks]**



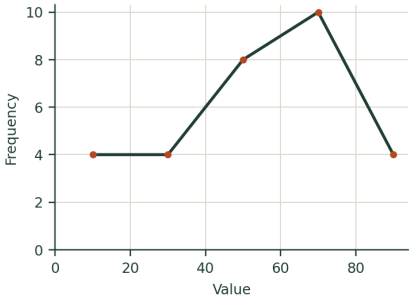
Answer _____

8 The frequency polygon shows the grouped data. How many more values are in the modal class than the first class? **[2 marks]**



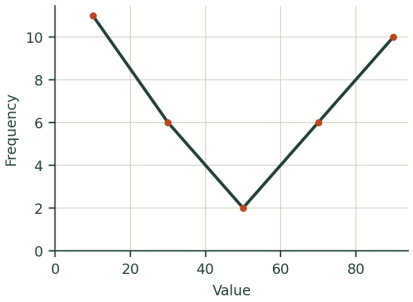
Answer _____

9 The frequency polygon shows the grouped data. What fraction of the values are in the first class? Give your answer in simplest form. **[2 marks]**



Answer _____

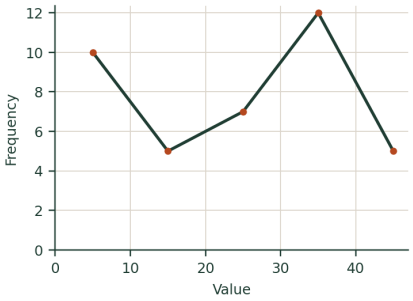
10 The frequency polygon shows the grouped data. What percentage of the values are in the last class? Give your answer to 1 decimal place. **[2 marks]**



Answer _____

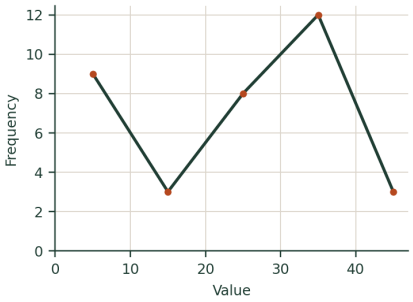
Stretch

11 The frequency polygon shows the grouped data. Estimate the mean (using the midpoints). Give your answer to 1 decimal place. **[3 marks]**



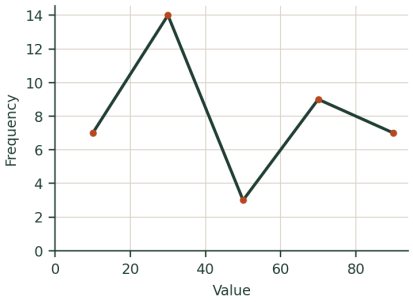
Answer _____

12 The frequency polygon shows the grouped data. In which class does the median lie? **[3 marks]**



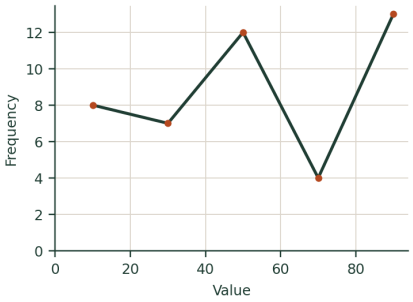
Answer _____

13 The frequency polygon shows the grouped data. How many values are less than the upper boundary of the third class? **[3 marks]**



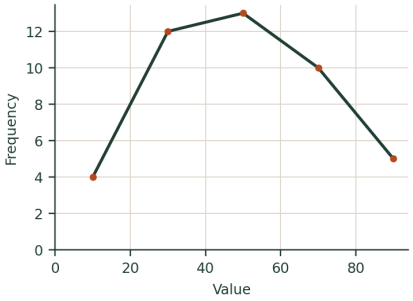
Answer _____

14 The frequency polygon shows the grouped data. Work out the total of the frequencies for classes with midpoint above 50. **[3 marks]**



Answer _____

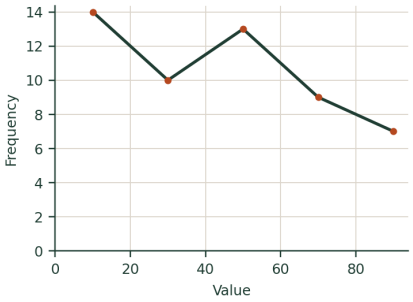
15 The frequency polygon shows the grouped data. Estimate the number of values in the data set that are above the start of the 4th class, as a percentage. **[3 marks]**



Answer _____

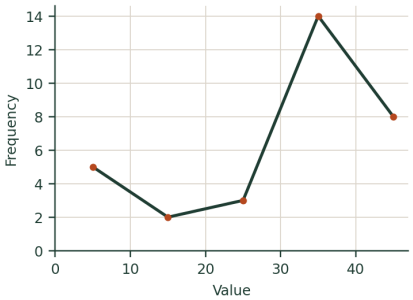
Challenge

16 The frequency polygon shows the grouped data. Work out an estimate of the mean to the nearest whole number. **[4 marks]**



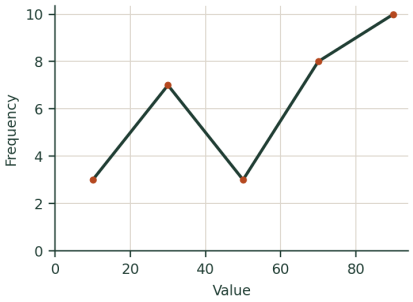
Answer _____

17 The frequency polygon shows the grouped data. Which class contains the lower quartile? **[4 marks]**



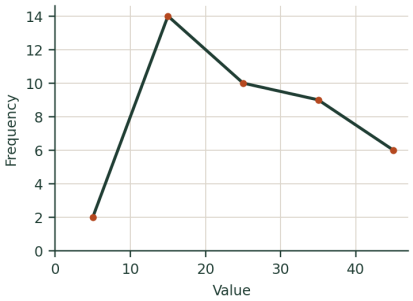
Answer _____

18 The frequency polygon shows the grouped data. Which class contains the upper quartile? **[4 marks]**



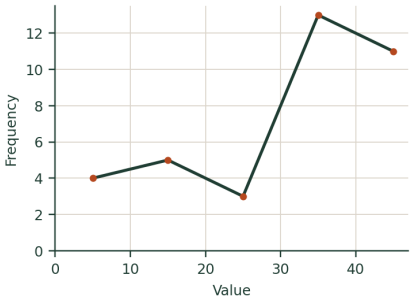
Answer _____

19 The frequency polygon shows the grouped data. Estimate the range of the data (largest possible − smallest possible). **[4 marks]**



Answer _____

20 The frequency polygon shows the grouped data. What is the greatest possible total of all the values? (Use upper class boundaries.) **[4 marks]**



Answer _____