Centre No.						Paper Reference								Surname	Initial(s)
Candidate No.						5	5	4	2	H	/	9	B	Signature	

Paper Reference(s)

5542H/9B

Examiner's use only

Team Leader's use only

Edexcel GCSE

Mathematics B (Modular) – 2544

Paper 9 – Section B (Non–Calculator)

Higher Tier

Unit 2 Test

Monday 12 November 2007 – Morning

Time for Section B: 20 minutes

Materials required for examination
Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser.
Tracing paper may be used.

Items included with question papers
Nil

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initials and signature.
Check that you have the correct question paper.
Answer ALL the questions. Write your answers in the spaces provided in this question paper.
If you need more space to complete your answer to any question, use additional answer sheets.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
This section has 6 questions. The total mark for this section is 15. The total mark for this paper is 30.
There are 8 pages in this question paper. Any blank pages are indicated.
Calculators may be used for Section A only.

Advice to Candidates

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

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SECTION B

Answer ALL SIX questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator for this section.

1. Jane plays some games of ten-pin bowling.

Jane shows her score in each game in a stem and leaf diagram.

7	1	5	5	9
8	0	3	7	
9	2	4	4	8

Key: 8 | 0 = 80

Find the range of her scores.

..... **Q1**

(Total 2 marks)

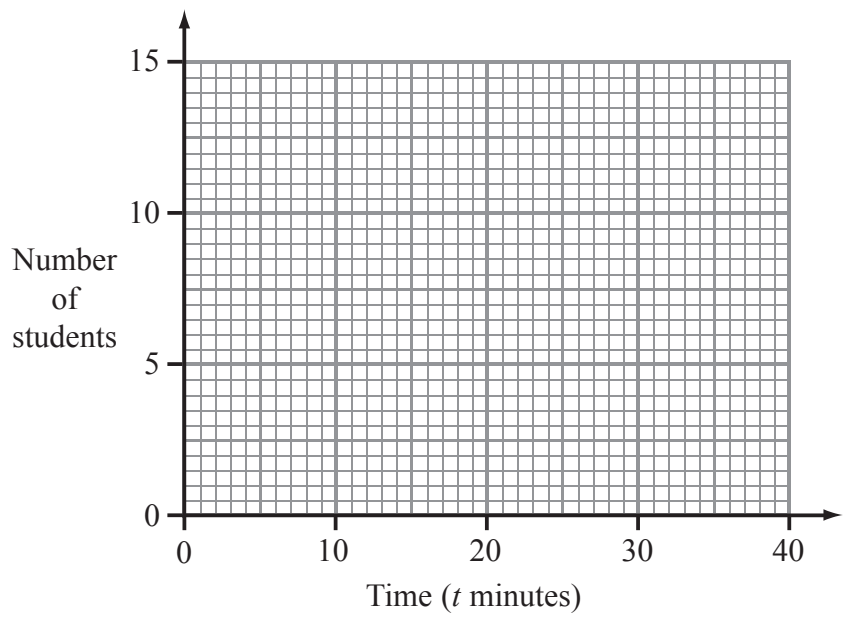
Leave blank

2. 30 students ran a cross-country race.
Each student's time was recorded.

The table shows information about these times.

Time (t minutes)	**Frequency**
$10 \leqslant t < 14$	2
$14 \leqslant t < 18$	5
$18 \leqslant t < 22$	12
$22 \leqslant t < 26$	8
$26 \leqslant t < 30$	3

On the grid, draw a frequency polygon to show this information.



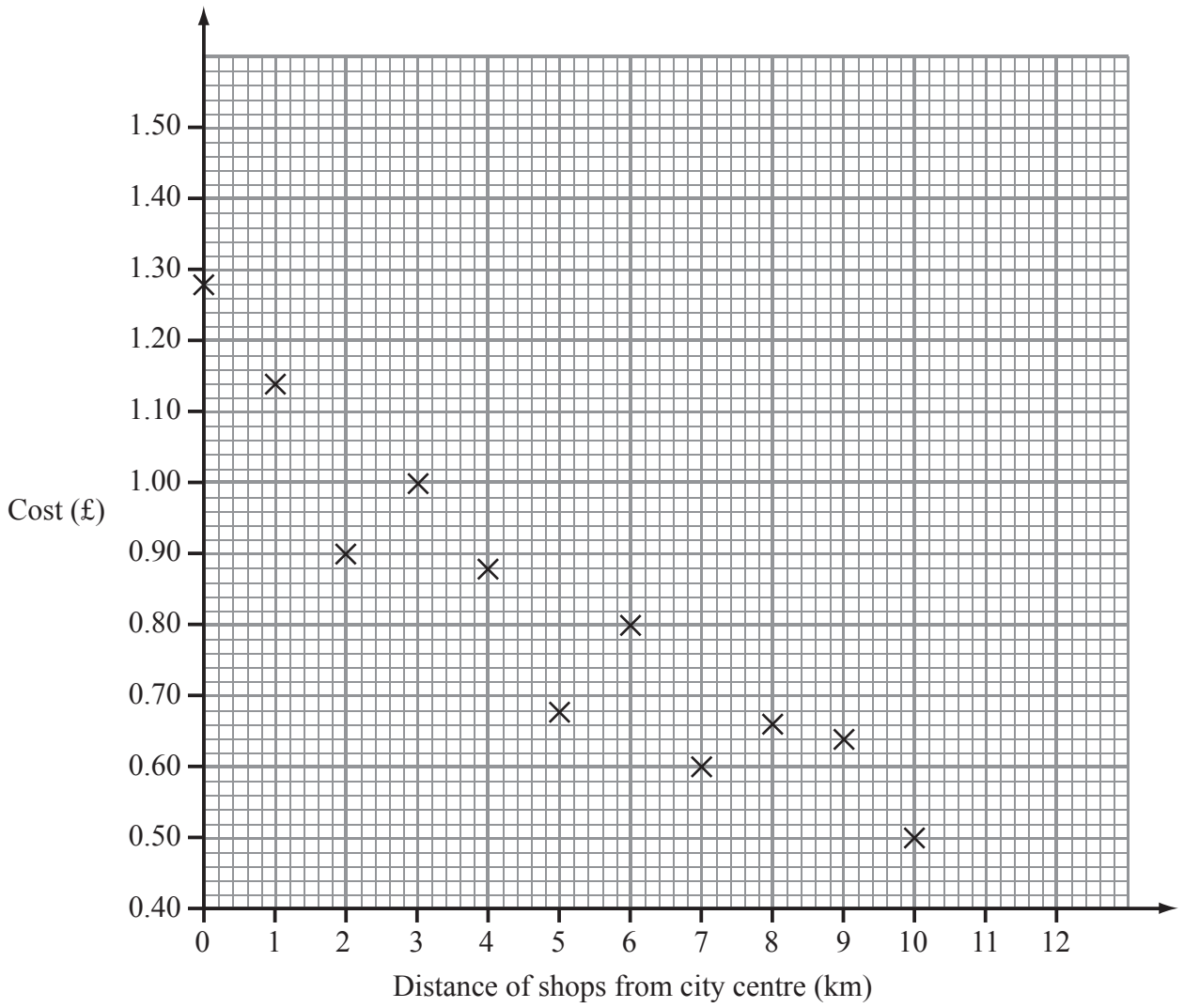
Q2

(Total 2 marks)

Leave blank

3. A one litre bottle of Holborn water costs £1.28 in shops in a city centre.
Shops outside the city centre also sell one litre bottles of Holborn water.

The scatter graph shows information about the costs of these bottles.



(a) Describe the relationship between the cost of a bottle of water and the distance of the shop from the city centre.

.....

.....

(1)

(b) Draw a line of best fit on the scatter graph.

(1)

Leave blank

Sam buys a bottle of water in a shop 4.5 km from the city centre.

(c) Use your line of best fit to estimate the cost of this bottle of water.

£ .....

(1)

(Total 3 marks)

Q3

4. The table shows some information about the heights of 40 trees.

Height of tree (h metres)	**Frequency**
$1 \leqslant h < 3$	3
$3 \leqslant h < 5$	12
$5 \leqslant h < 7$	15
$7 \leqslant h < 9$	8
$9 \leqslant h < 11$	2

Complete the cumulative frequency table.

Height of tree (h metres)	**Cumulative frequency**
$1 \leqslant h < 3$	3
$1 \leqslant h < 5$	
$1 \leqslant h < 7$	
$1 \leqslant h < 9$	
$1 \leqslant h < 11$	

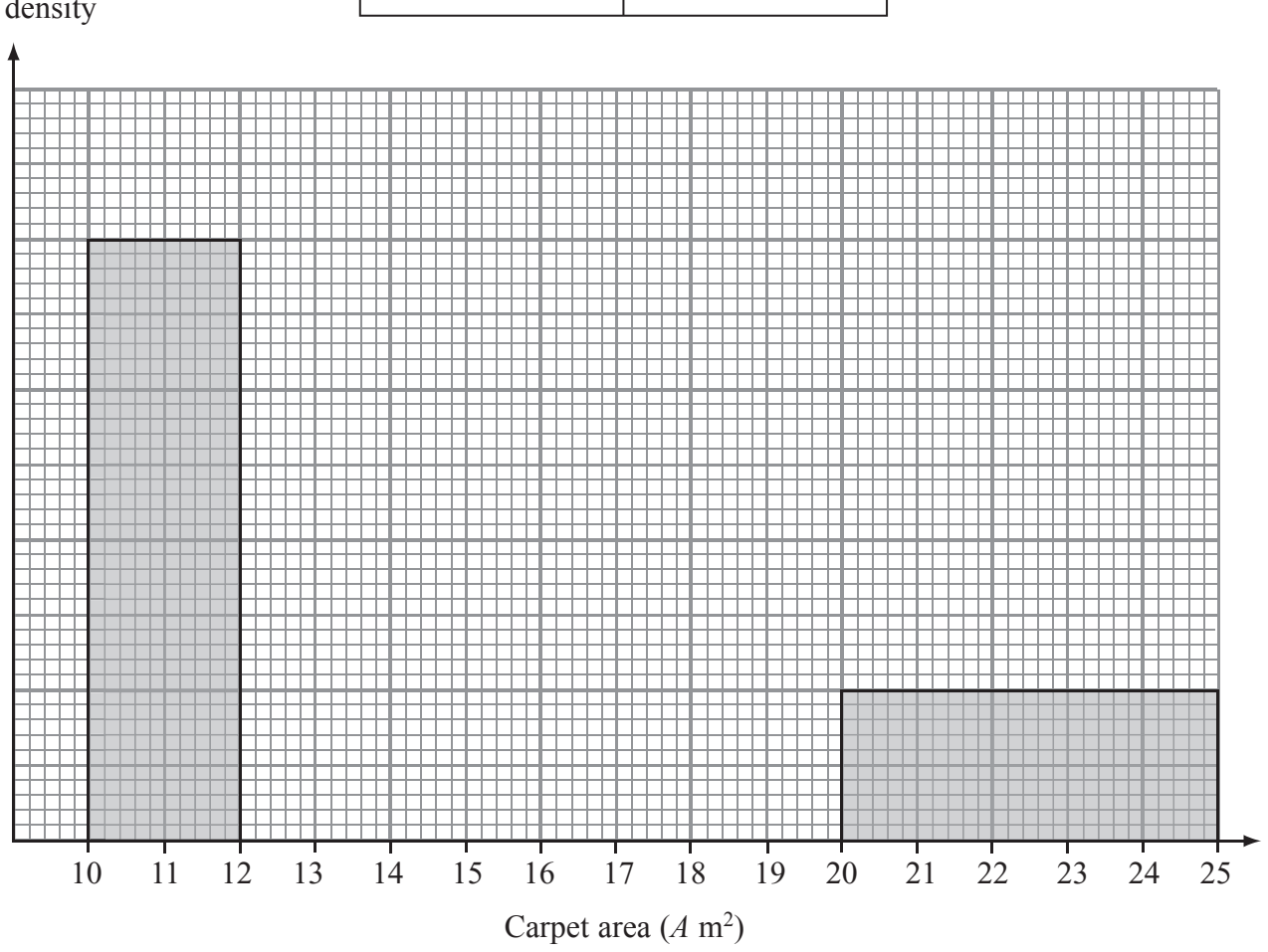
(Total 1 mark)

Q4

Leave blank

5. The table and histogram show some information about the area of some carpets.

Carpet area (A m^2)	**Frequency**
$10 < A \leqslant 12$	
$12 < A \leqslant 15$	15
$15 < A \leqslant 20$	12
$20 < A \leqslant 25$	10



(a) Use the histogram to complete the table.

(1)

(b) Use the table to complete the histogram.

(2)

(Total 3 marks)

Q5

Leave blank

6. Caroline cycles to school.
She passes through two sets of traffic lights.

The probability that she has to stop at the first set of traffic lights is $\frac{2}{5}$

If she has to stop at the first set of traffic lights, the probability that she has to stop at the second set is $\frac{5}{6}$

If she does **not** have to stop at the first set of traffic lights, the probability that she has to stop at the second set is $\frac{1}{2}$

Caroline cycles to school on the last day of term.

Work out the probability that she has to stop at only **one** set of traffic lights.

.....

Q6

(Total 4 marks)

TOTAL FOR SECTION B: 15 MARKS

TOTAL FOR PAPER: 30 MARKS

END

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