

Centre No.						Paper Reference						Surname	Initial(s)	
Candidate No.						5	5	3	6	/	1	6	Signature	

Paper Reference(s)

5536/16

Edexcel GCSE

Mathematics B – 1388

Paper 16 (Non-Calculator)

Intermediate Tier

Tuesday 6 November 2007 – Morning

Time: 1 hour 15 minutes

Examiner's use only

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Team Leader's use only

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**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.  
**You must NOT write on the formulae page. Anything you write on the formulae page will gain NO credit.**  
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).  
There are 15 questions in this question paper. The total mark for this paper is 62.  
There are 16 pages in this question paper. Any blank pages are indicated.  
**Calculators must not be used.**

**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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H 3 1 1 1 9 A 0 1 1 6

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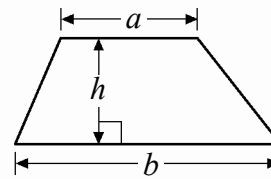
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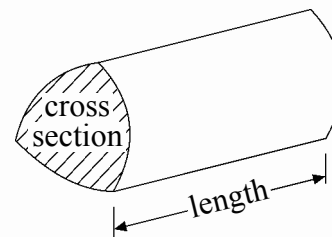
Formulae: Intermediate Tier

**You must not write on this formulae page.  
Anything you write on this formulae page will gain NO credit.**

**Area of trapezium** =  $\frac{1}{2}(a + b)h$



**Volume of prism** = area of cross section  $\times$  length



Answer ALL FIFTEEN questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

You must NOT use a calculator.

1. The two-way table shows some information about the colours of Ford cars and of Toyota cars in a garage.

	white	blue	red	Total
Ford	5			21
Toyota		7		
Total	9	16		40

(a) Write down the total number of white cars.

.....

(1)

(b) Complete the two-way table.

(3)

(Total 4 marks)

2. Work out  $\text{£}3.75 \times 24$

£ .....

(Total 3 marks)

Q1

Q2

3

Turn over

Q3

$$\frac{3}{4} \quad \frac{5}{6} \quad \frac{2}{3} \quad \frac{7}{12}$$

(b) Work out  $\frac{3}{4} + \frac{1}{6}$

(2)

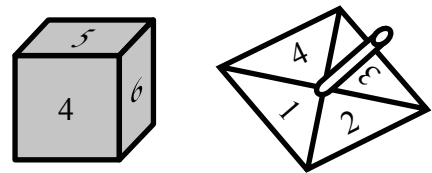
(2)

**(Total 4 marks)**

4. Joe rolls a 6-sided dice and spins a 4-sided spinner.

The dice is labelled 1, 2, 3, 4, 5, 6

The spinner is labelled 1, 2, 3, 4



Joe adds the score on the dice and the score on the spinner to get the total score.

He records the possible total scores in a table.

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3					
3	4					
4	5					

(a) Complete the table of possible total scores.

(2)

(b) Write down all the ways in which Joe can get a total score of 5  
One of them has been done for you.

(1, 4), .....

(2)

(Total 4 marks)

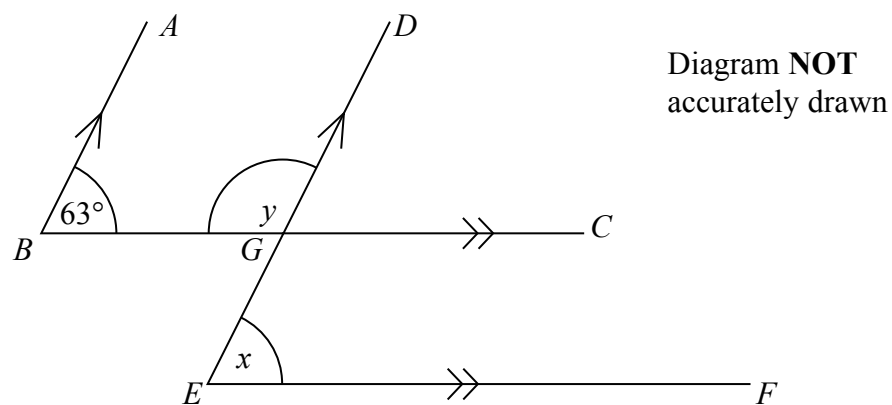
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Q4



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5.



$BA$  is parallel to  $ED$ .  
 $BG$  is parallel to  $EF$ .  
 Angle  $ABC = 63^\circ$ .

(a) (i) Find the size of angle  $x$ .

.....<sup>o</sup>

(ii) Give a reason for your answer.

.....

.....

(2)

(b) Work out the size of angle  $y$ .

.....<sup>o</sup>

(1)

(Total 3 marks)

Q5

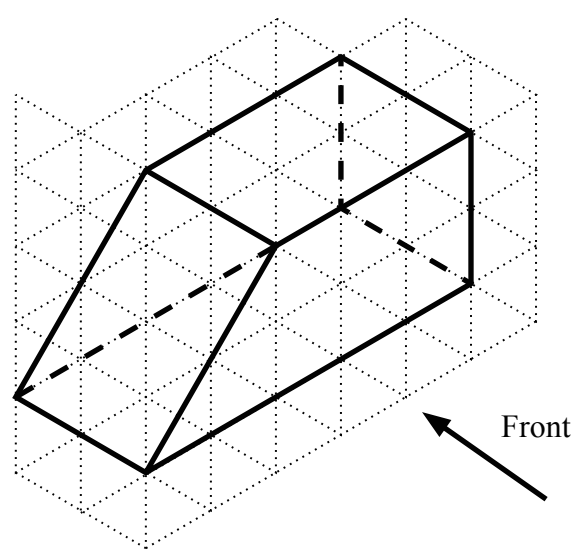


<p>6. Lillian, Max and Nazia share a sum of money in the ratio 2 : 3 : 5</p> <p>(a) What fraction of the money does Max receive?</p> <p>.....</p> <p>(2)</p> <p>Nazia receives £60</p> <p>(b) Work out how much money Lillian receives.</p> <p>£ .....</p> <p>(3)</p> <p>(Total 5 marks)</p>	<p>Leave blank</p> <p><b>Q6</b></p> <div></div>
<p>7. Here are the first five terms of a number sequence.</p> <p>– 4      – 1      2      5      8</p> <p>(a) Write down the next term of this sequence.</p> <p>.....</p> <p>(1)</p> <p>(b) Find, in terms of <math>n</math>, an expression for the <math>n</math>th term of this number sequence.</p> <p>.....</p> <p>(2)</p> <p>(Total 3 marks)</p>	<p><b>Q7</b></p> <div></div>

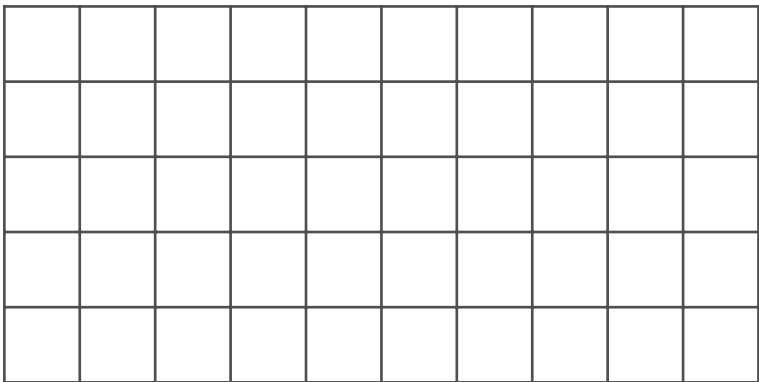


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8. The diagram shows a prism drawn on a centimetre isometric grid.

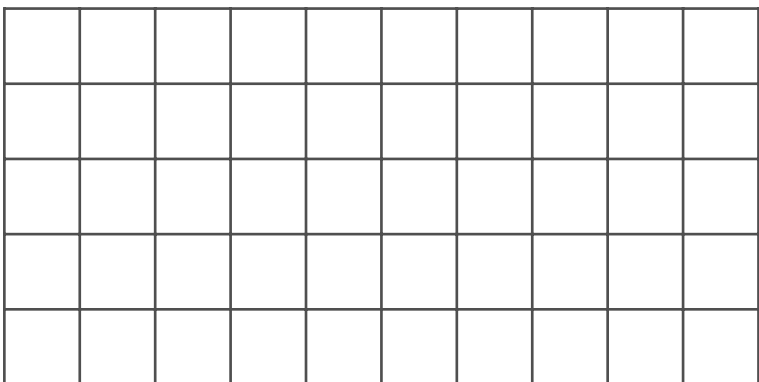


(a) On the centimetre grid, draw the front elevation of the prism from the direction marked by the arrow.



(2)

(b) On the centimetre grid draw a plan of the prism.



(2)

(Total 4 marks)

Q8



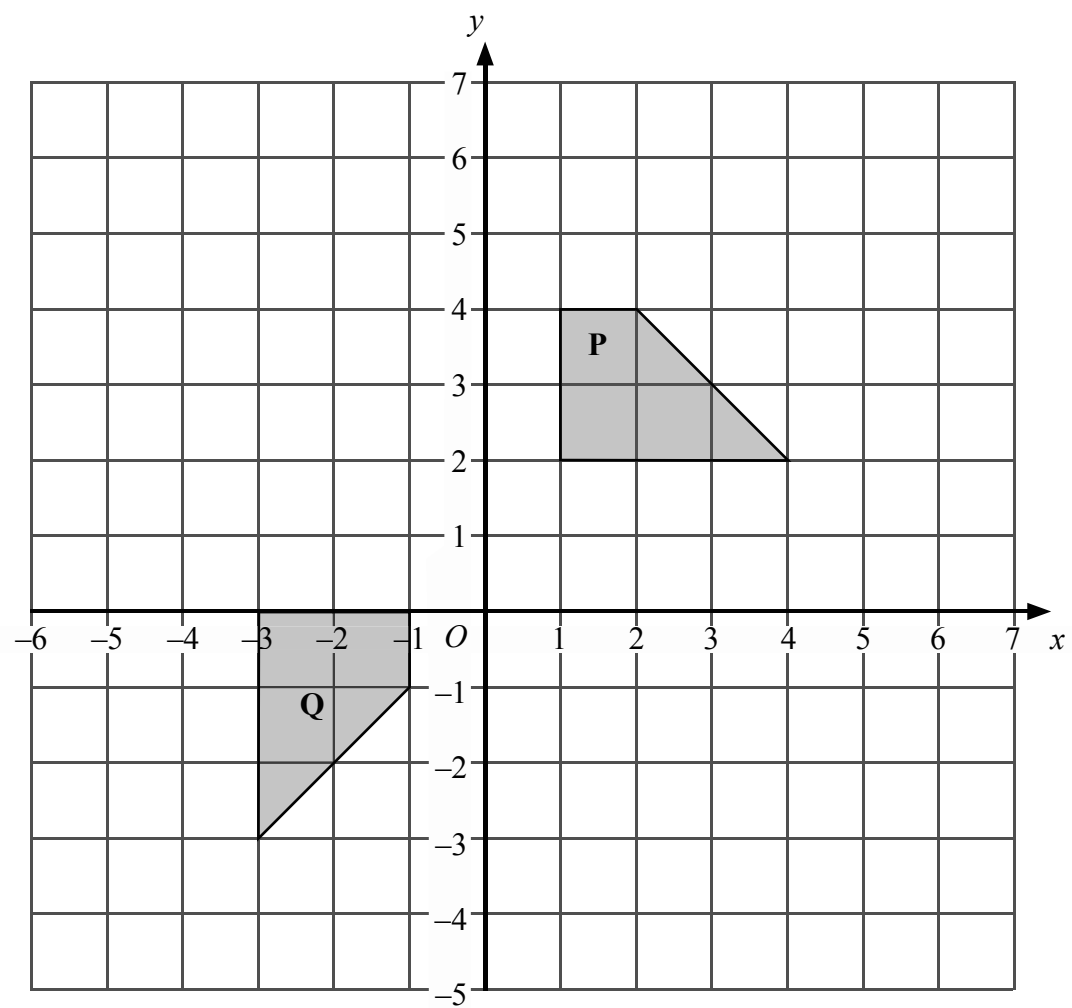


<p>9. (a) Simplify <math>m^6 \times m^3</math></p> <p>..... (1)</p> <p>(b) Simplify <math>\frac{p^8}{p^2}</math></p> <p>..... (1)</p> <p>(c) Simplify <math>12x^3y^5 \div 2xy^2</math></p> <p>..... (2)</p> <p>(d) Simplify <math>(t^3)^2</math></p> <p>..... (1)</p> <p>(e) Simplify <math>\frac{3-3x}{1-x}</math></p> <p>..... (2)</p> <p>(Total 7 marks)</p>	<p>Leave blank</p> <p><b>Q9</b></p> <div></div>



H 3 1 1 1 9 A 0 9 1 6

10.



Describe fully the single transformation that will map shape **P** onto shape **Q**.

.....

.....

(Total 3 marks)

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blank

Q10



<p><b>11.</b> (a) Factorise <math>x^2 - 5x</math></p> <p>..... (2)</p> <p>(b) Factorise completely <math>3a^2 - 6a</math></p> <p>..... (2)</p> <p>(c) Make <math>q</math> the subject of the formula <math>P = 2q + 10</math></p> <p><math>q =</math> ..... (2)</p> <p>(Total 6 marks)</p>	<p>Leave blank</p> <p><b>Q11</b></p> <div></div>
<p><b>12.</b></p> <div data-bbox="714 1305 1281 1751"> </div> <p><math>A</math> is the point with coordinates <math>(2, 3)</math>.  <math>B</math> is the point with coordinates <math>(4, 7)</math>.</p> <p>(a) Work out the coordinates of the midpoint of <math>AB</math>.</p> <p>(..... , .....) (2)</p> <p>(b) Find the gradient of the line segment <math>AB</math>.</p> <p>..... (2)</p> <p>(Total 4 marks)</p>	<p><b>Q12</b></p> <div></div>

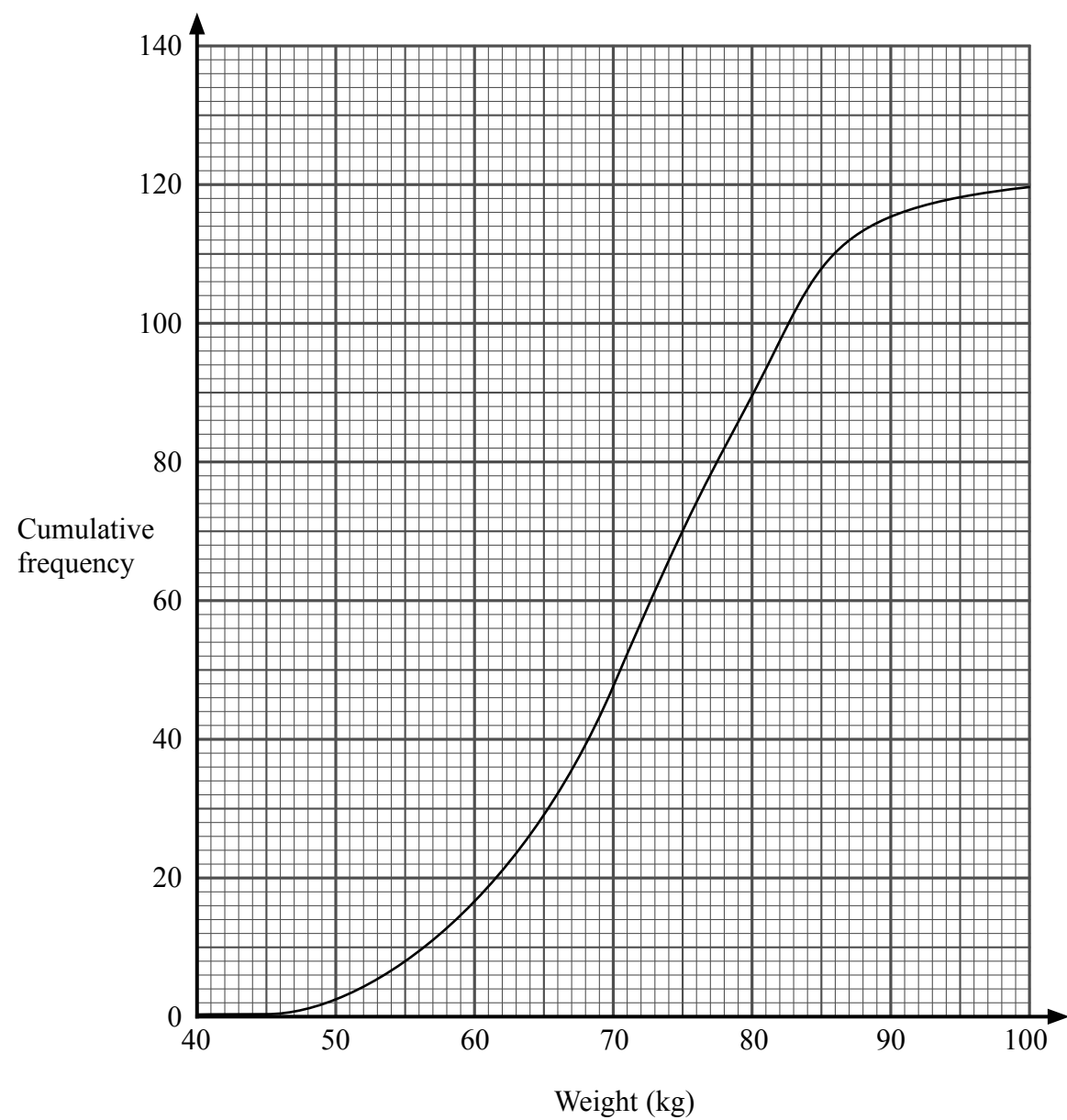


<p><b>13.</b> (a) (i) Write 7900 in standard form.</p> <p>.....</p> <p>(ii) Write 0.00035 in standard form.</p> <p>.....</p> <p><b>(2)</b></p> <p>(b) Work out <math>\frac{4 \times 10^3}{8 \times 10^{-5}}</math></p> <p>Give your answer in standard form.</p> <p>.....</p> <p><b>(2)</b></p> <p><b>(Total 4 marks)</b></p>	<p>Leave blank</p> <p><b>Q13</b></p> <div></div>



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14. Here is the cumulative frequency curve of the weights of 120 girls at Mayfield Secondary School.



Use the cumulative frequency curve to find an estimate for the

- (i) median weight,

..... kg

- (ii) interquartile range of the weights.

..... kg

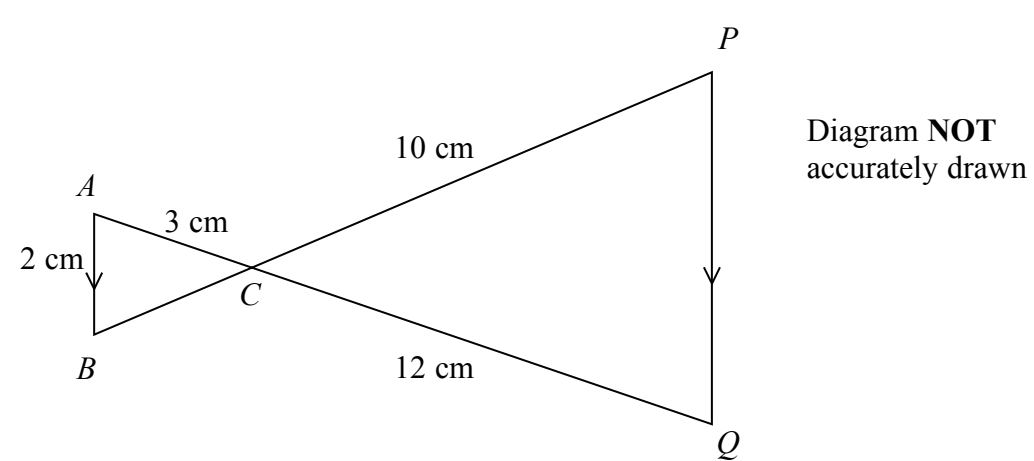
(Total 3 marks)

Q14



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15.



$ACQ$  and  $BCP$  are straight lines.  
 $AB$  is parallel to  $PQ$ .  
 $AB = 2$  cm.  
 $AC = 3$  cm.  
 $CQ = 12$  cm.  
 $CP = 10$  cm.

(a) Work out the length of  $PQ$ .

..... cm  
(2)

(b) Work out the length of  $BP$ .

..... cm  
(3)

(Total 5 marks)

Q15

TOTAL FOR PAPER: 62 MARKS

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