

Centre No.						Paper Reference					Surname	Initial(s)	
Candidate No.						5	5	1	0	/	10	A	Signature

Paper Reference(s)

**5510/10A**

**Edexcel GCSE**

**Mathematics B – 1388**

Paper 10 – Section A (Non-Calculator)

**Higher Tier**

Module Test 1

Thursday 8 March 2007 – Morning

Time for Section A: 25 minutes



Examiner's use only

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Team Leader's use only

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Section	Leave Blank
A	
B	

**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). This section has 6 questions. The total mark for this section is 19. The total mark for this paper is 38. There are 8 pages in this question paper. Any blank pages are indicated.

**Calculators may be used for Section B 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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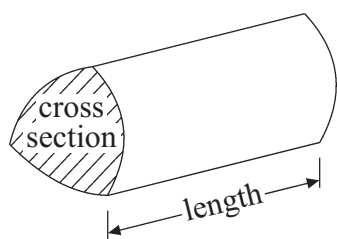
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GCSE Mathematics 1387/8

Formulae: Higher Tier

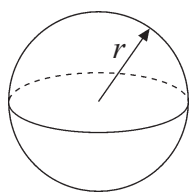
**You must not write on this formulae page.  
Anything you write on this formulae page will gain NO credit.**

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



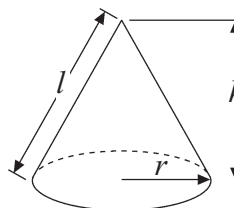
**Volume of sphere** =  $\frac{4}{3} \pi r^3$

**Surface area of sphere** =  $4\pi r^2$

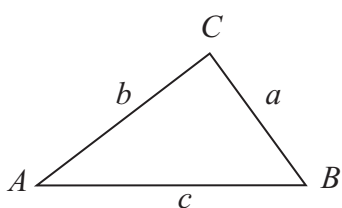


**Volume of cone** =  $\frac{1}{3} \pi r^2 h$

**Curved surface area of cone** =  $\pi r l$



**In any triangle ABC**



**Sine Rule**  $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

**Cosine Rule**  $a^2 = b^2 + c^2 - 2bc \cos A$

**Area of triangle** =  $\frac{1}{2} ab \sin C$

**The Quadratic Equation**

The solutions of  $ax^2 + bx + c = 0$   
where  $a \neq 0$ , are given by

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



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**SECTION A**

**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. Helen, Stuart and Robert share £300 in the ratio 5 : 3 : 2

Work out how much money each person receives.

Helen £ .....

Stuart £ .....

Robert £ .....

**Q1**

**(Total 3 marks)**

2. (a) Simplify  $p^4 \times p^6$

.....  
**(1)**

- (b) Simplify  $(q^2)^3$

.....  
**(1)**

- (c) Simplify  $12x^5 \div 4x^3$

.....  
**(2)**

**Q2**

**(Total 4 marks)**

3

**Turn over**



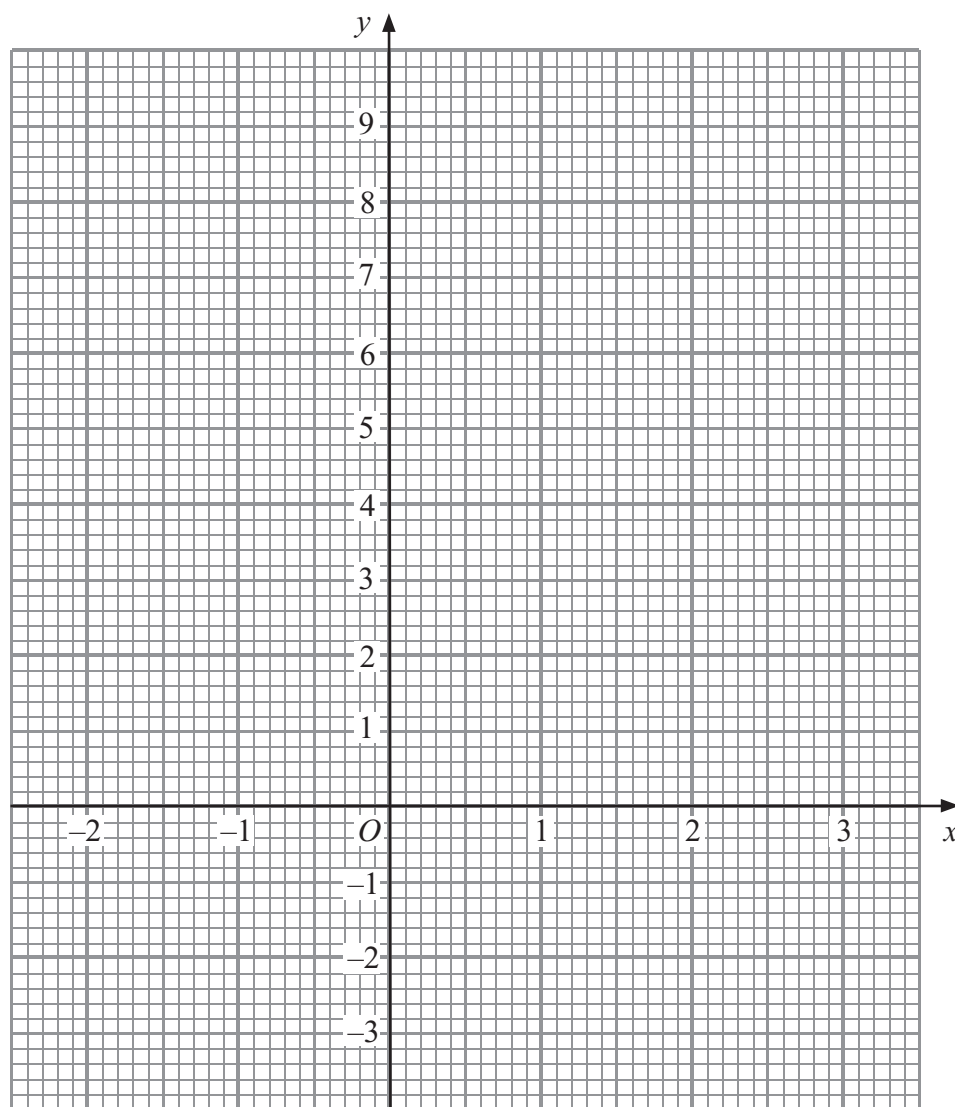
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3. (a) Complete the table of values for  $y = x^2 - 2x$

$x$	-2	-1	0	1	2	3
$y$		3	0			3

(2)

(b) On the grid, draw the graph of  $y = x^2 - 2x$



(2)

Q3

(Total 4 marks)

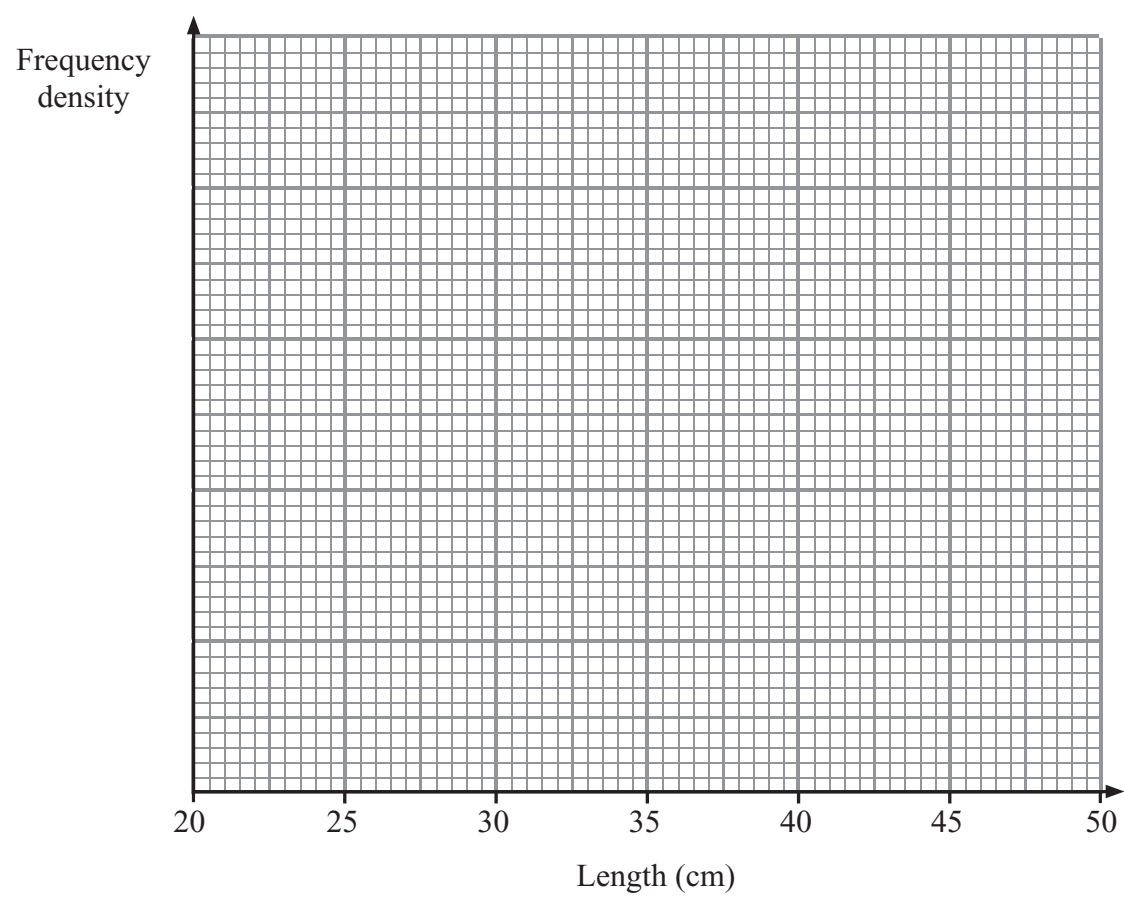


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4. The table shows some information about the lengths, in cm, of 60 babies.

Length ( $x$ cm)	Frequency
$20 < x \leq 30$	10
$30 < x \leq 45$	30
$45 < x \leq 50$	20

Draw a histogram for this information.



(Total 3 marks)

Q4

5. Convert the recurring decimal  $0.04\dot{7}$  to a fraction.

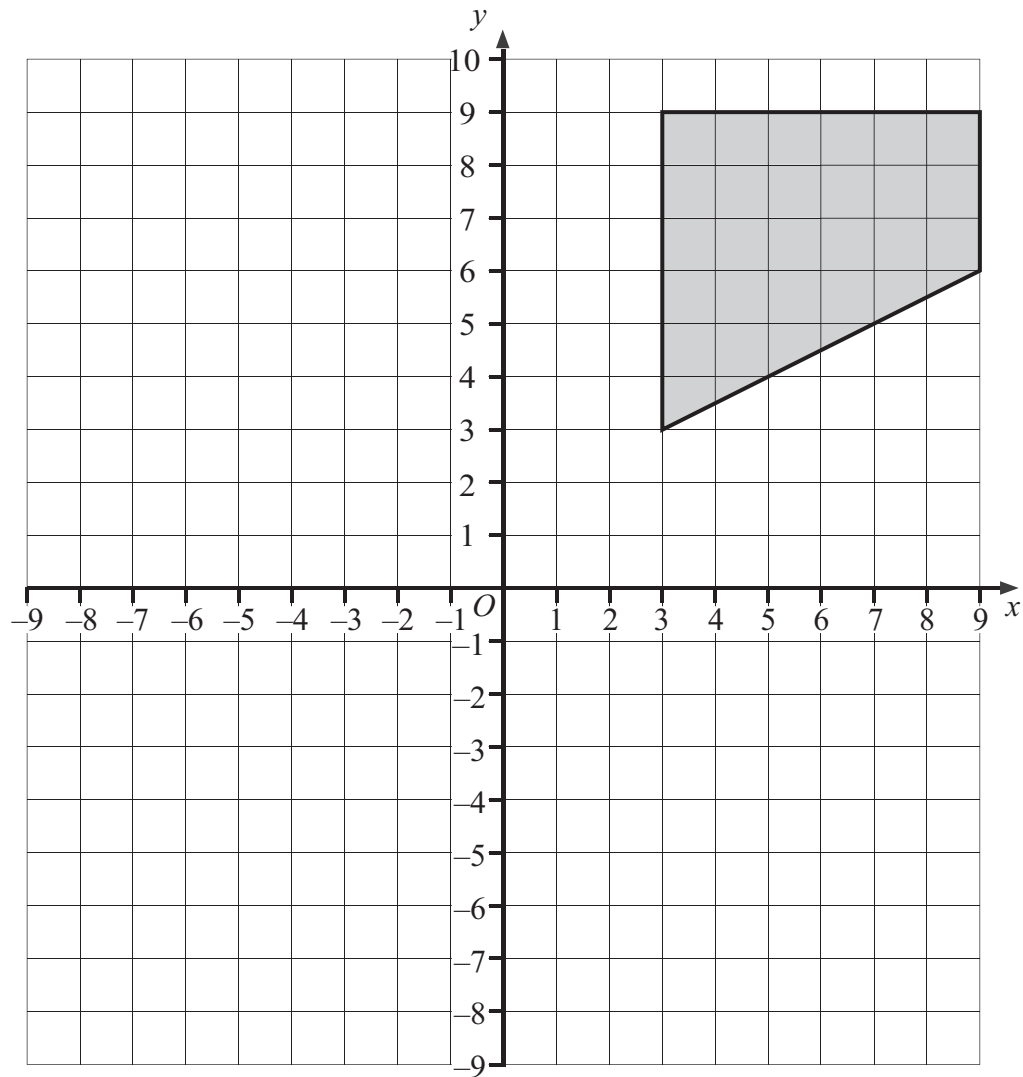
(Total 2 marks)

Q5



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6.



On the grid, enlarge the shaded shape by a scale factor of  $-\frac{1}{3}$ , centre  $(-3, -3)$ .

(Total 3 marks)

Q6

TOTAL FOR SECTION A: 19 MARKS

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