

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

Paper Reference(s)

5542H/9A

Edexcel GCSE

Mathematics B (Modular) – 2544

Paper 9 – Section A (Calculator)

Higher Tier

Unit 2 Test

Monday 18 June 2007 – Morning

Time for Section A: 20 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, calculator. 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 5 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.

If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

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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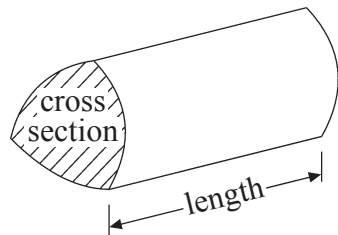
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GCSE Mathematics (Modular) 2544

Formulae: Higher Tier

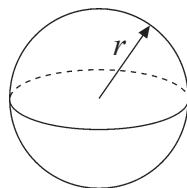
**You must not write on this formulae page.
Anything you write on this formulae page will gain NO credit.**

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



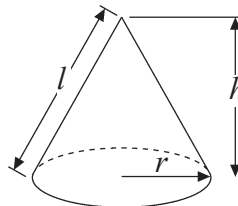
Volume of sphere = $\frac{4}{3}\pi r^3$

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

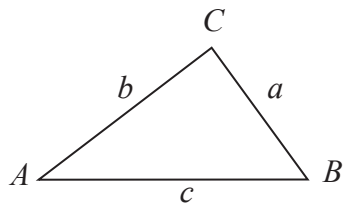


Volume of cone = $\frac{1}{3}\pi r^2 h$

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



In any triangle ABC



The Quadratic Equation

The solutions of $ax^2 + bx + c = 0$

where $a \neq 0$, are given by

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

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 = $\frac{1}{2} ab \sin C$



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SECTION A

Answer ALL FIVE questions.

Write your answers in the spaces provided.

You must write down all stages in your working.

1. Sunita plays a game of chess.
She can win or draw or lose the game.

The table shows each of the probabilities that she will win or draw the game.

Result	Win	Draw	Lose
Probability	0.6	0.3	

Work out the probability that she will lose the game.

Q1

.....
(Total 2 marks)



2. 60 people went on a boat.

The grouped frequency table shows information about their ages.

Age (A years)	Frequency
$0 < A \leq 10$	4
$10 < A \leq 20$	8
$20 < A \leq 30$	11
$30 < A \leq 40$	16
$40 < A \leq 50$	9
$50 < A \leq 60$	7
$60 < A \leq 70$	5

(a) Complete the cumulative frequency table.

Age (A years)	Cumulative frequency
$0 < A \leq 10$	4
$0 < A \leq 20$	
$0 < A \leq 30$	
$0 < A \leq 40$	
$0 < A \leq 50$	
$0 < A \leq 60$	
$0 < A \leq 70$	

(1)

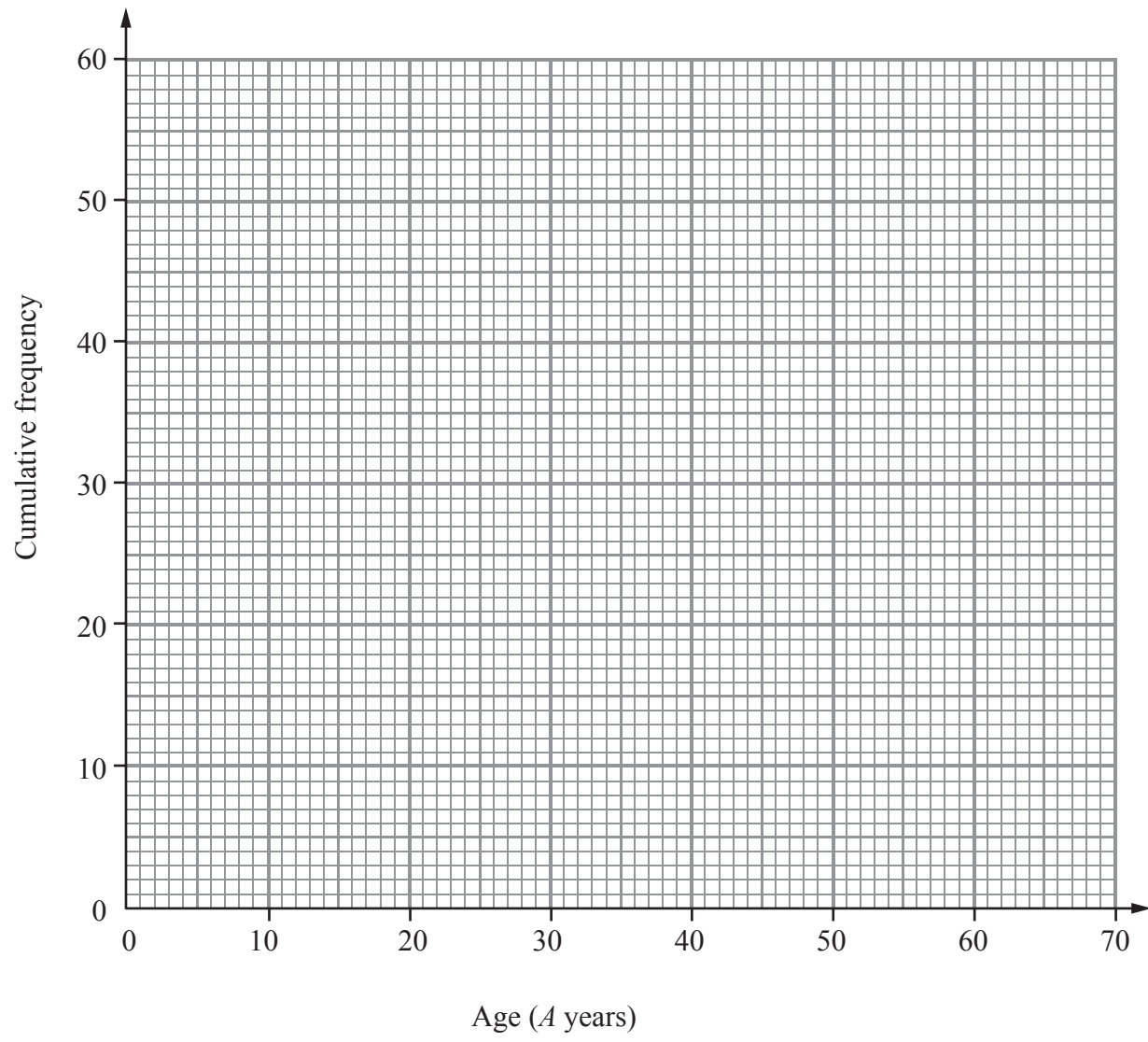
(b) On the grid opposite, draw a cumulative frequency graph for your table.

(2)

(c) Use your graph to find an estimate for the median age of these 60 people.

..... years
(1)





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Q2

(Total 4 marks)

5

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3. Some students took a history test.

Here are their marks.

21 38 41 39 26 15
48 38 17 43 21 36

Draw an ordered stem and leaf diagram for these marks.

You must include a key.

1		
<hr/>		
2		
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3		
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4		

Key:

Q3

(Total 3 marks)



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4. Jasmine sells soft drinks.
She recorded the number of drinks she sold from July to December.

The table shows this information.

July	August	September	October	November	December
340	352	336	272	256	264

Work out the 4-month moving averages for this information.

The first one has been worked out for you.

325, ,

(Total 2 marks)

Q4

7

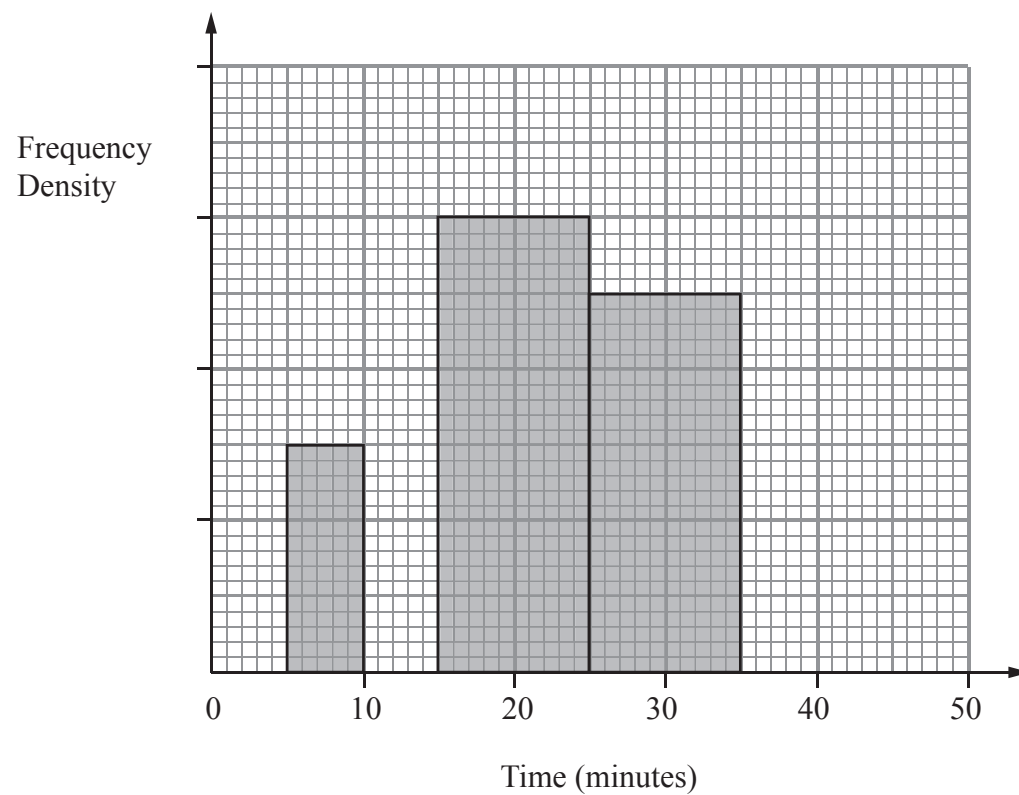
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5. Sam asks some students how long they took to finish their science homework. The table and histogram show some of this information.

Time (minutes)	Frequency
$5 < x \leq 10$	
$10 < x \leq 15$	20
$15 < x \leq 25$	
$25 < x \leq 35$	50
$35 < x \leq 50$	15



- (a) Use the information in the histogram to complete the table. (2)
- (b) Use the information in the table to complete the histogram. (2)

(Total 4 marks)

Q5

TOTAL FOR SECTION A: 15 MARKS

END

