



General Certificate of Secondary Education  
2011

Centre Number

71

Candidate Number

## Mathematics

Module N2 Paper 2  
(With calculator)  
Foundation Tier

[GMN22]

TUESDAY 31 MAY

10.30 am–11.15 am



### TIME

45 minutes.

### INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper.

Answer **all twelve** questions.

Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.

### INFORMATION FOR CANDIDATES

The total mark for this paper is 44.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

You should have a calculator, ruler, compasses, set-square and protractor.

The Formula Sheet is on page 2.

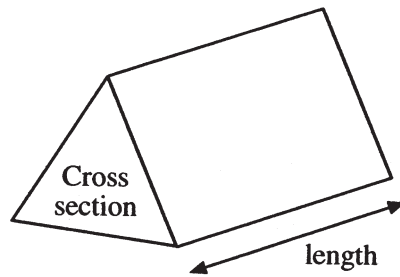
### For Examiner's use only

Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

Total  
Marks

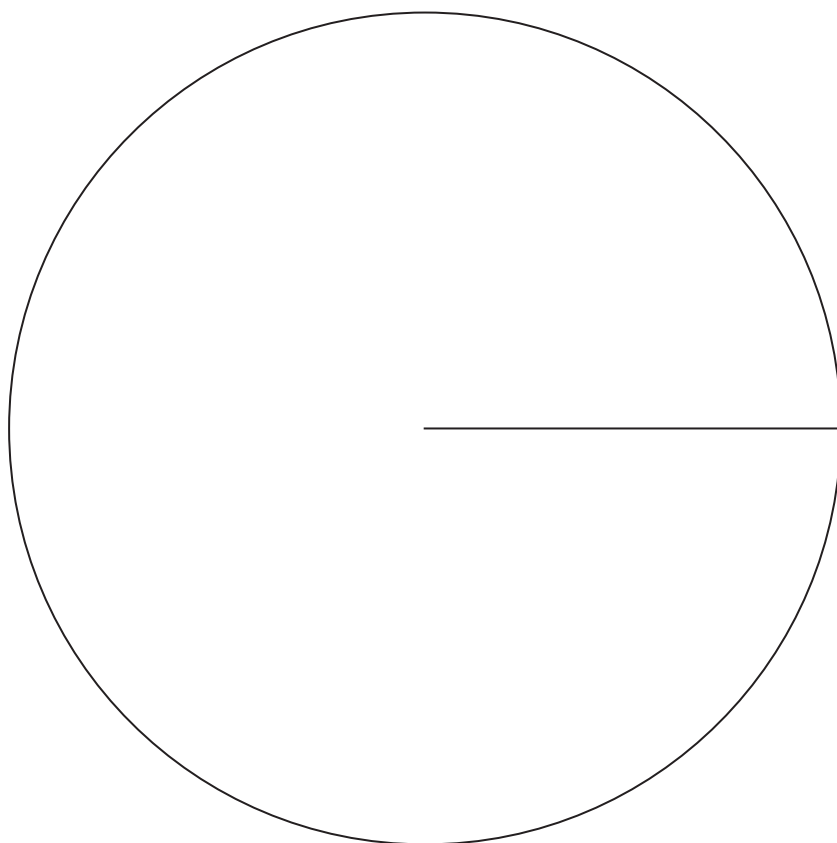
# Formula Sheet

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



Cream	16
Fruit	10
Jam	9
Chocolate	25

Draw a pie chart to illustrate this information.



[4]

Examiner Only	
Marks	Remark

**(b)** John pours himself a glass of juice. The volume in the carton is now 412.5 ml.

Answer \_\_\_\_\_ [3]

4

(i) the cube root of 64

Answer \_\_\_\_\_ [1]

(ii)  $3.3^2 + 6^3$

Answer \_\_\_\_\_ [1]

**(b)** Write 23.35 correct to three significant figures.

Answer \_\_\_\_\_ [1]

4 Andrew earns £900 a month. He spends  $\frac{1}{4}$  of this money on rent and  $\frac{1}{5}$  on computer games. What fraction of the £900 has he left?

Answer \_\_\_\_\_ [4]

Examiner Only	
Marks	Remark

**(a)** Write down an expression, in terms of  $a$ , for the cost of a child ticket.

Answer £ \_\_\_\_\_ [1]

(i) Use this information to write down an **equation** in terms of  $a$ .

Answer \_\_\_\_\_ [2]

**(ii)** Solve your equation to find the cost of an adult ticket.

Answer £ \_\_\_\_\_ [2]

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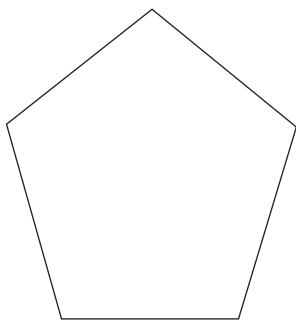




Calculate the circumference of this coin.

Answer \_\_\_\_\_ cm [2]

(b)



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[2]

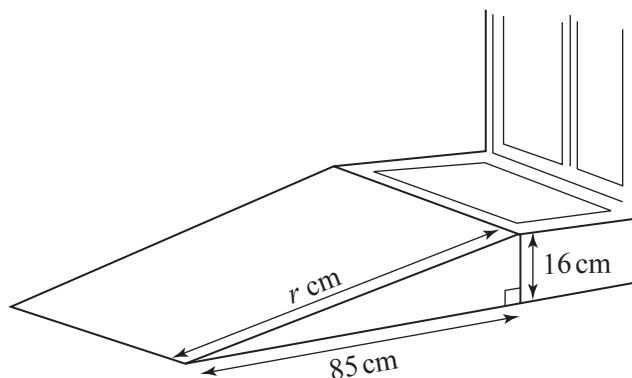
Calculate the sale price.

Answer £ \_\_\_\_\_ [3]

Examiner Only	
Marks	Remark



Calculate the sloping length,  $r$  cm, of the ramp to the edge of the step.



Answer \_\_\_\_\_ cm [3]

- 10 (a)** At birth a baby boy weighed 4 kg. Six weeks later he weighed 7 kg.

What was the percentage increase in his weight?

Answer % [2]

- (b)** Colin leaves £4800 in the bank for two years.

It earns compound interest of 3% per year.

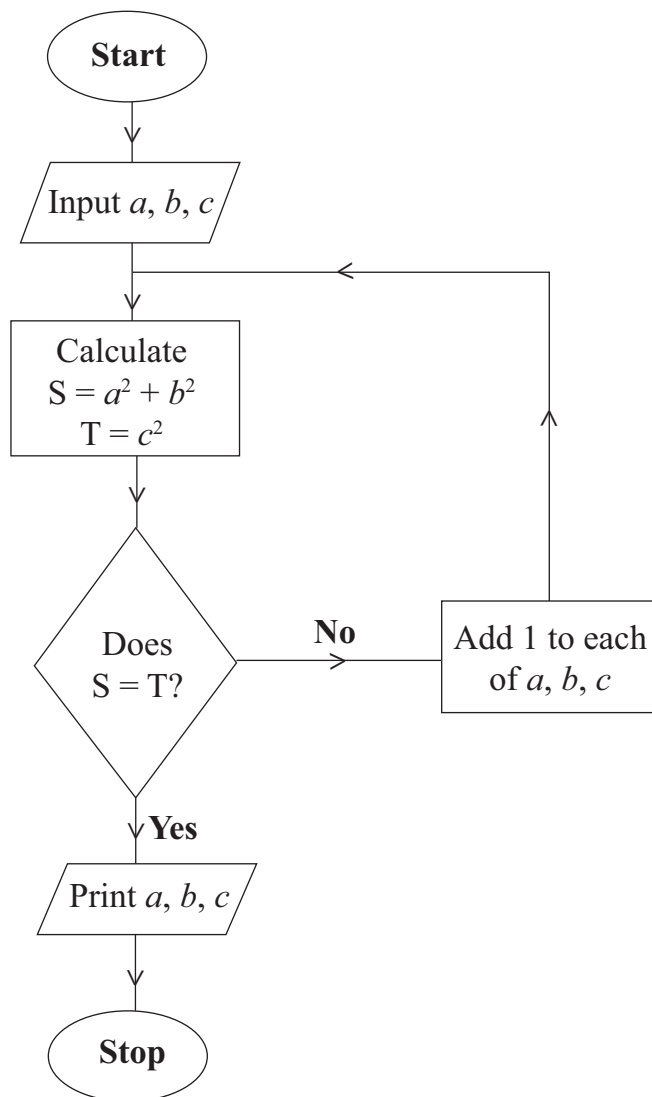
Calculate the total amount Colin has in the bank at the end of the two years.

Answer £ [2]

**Show all your working.**

Answer  $x =$  \_\_\_\_\_ [3]

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Starting with  $a = 2$ ,  $b = 9$ ,  $c = 10$  use the flow chart to find the values printed.

$a$	$b$	$c$	S	T
2	9	10		

Answer  $a =$  \_\_\_\_\_,  $b =$  \_\_\_\_\_,  $c =$  \_\_\_\_\_ [3]

**THIS IS THE END OF THE QUESTION PAPER**

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