



Rewarding Learning

General Certificate of Secondary Education
2012

Centre Number

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Candidate Number

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Mathematics

Unit T1

(With calculator)

Foundation Tier

[GMT11]



GMT11

WEDNESDAY 6 JUNE 9.15 am–10.45 am

TIME

1 hour 30 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.

Complete in blue or black ink only. **Do not write in pencil or with a gel pen.**

Answer **all twenty-four** questions.

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

You **may** use a calculator for this paper.

INFORMATION FOR CANDIDATES

The total mark for this paper is 100.

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

Functional Elements will be assessed in this paper.

Quality of written communication will be assessed in **questions 11, 21 and 22.**

You should have a calculator, ruler, compasses and a protractor.

The Formula Sheet is overleaf.

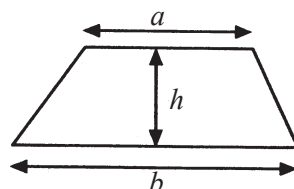
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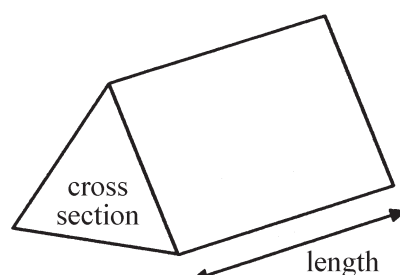
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Formula Sheet













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




Volume of prism = area of cross section \times length



1

tea						
coffee						
milk						
hot chocolate						

Key:  = 10 cups

(a) How many cups of tea were sold?

Answer _____ [1]

(b) In total there were 150 drinks sold.

(i) Calculate the number of cups of hot chocolate sold.

Answer _____ [1]

(ii) Complete the pictogram to show the number of cups of hot chocolate sold. [1]

Examiner Only	
Marks	Remark
Total Question 1	

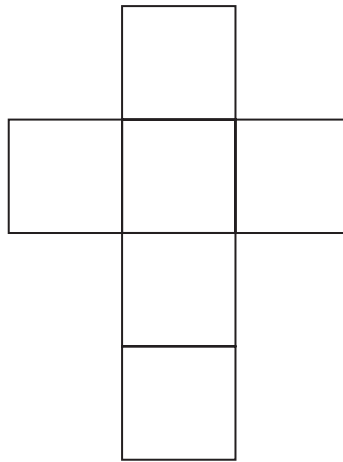
[Turn over



2 (a) The following are nets of 3D shapes.

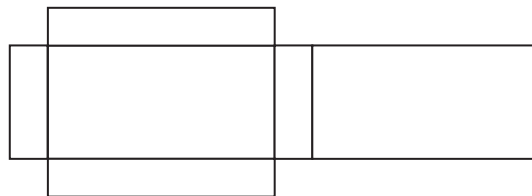
Write down the names of the 3D shapes.

(i)



Answer _____ [1]

(ii)



Answer _____ [1]

(b) When the net in part **(a)(ii)** is folded to make a 3D shape, how many vertices will it have?

Answer _____ [1]

Examiner Only	
Marks	Remark
Total Question 2	



Examiner Only

Remark

Answer _____ [1]

(i) 5389 to the nearest hundred,

Answer _____ [1]

(ii) 36% as a decimal,

Answer _____ [1]

(iii) 28.49 to the nearest whole number,

Answer _____ [1]

(iv) 0.47 as a fraction.

Answer _____ [1]

(c) Which of the following are multiples of 16? Circle your answers.

8 62 3 32 4 16

[2]

(d) Jill's age is the smallest number which has 2, 3 and 5 as factors. What age is Jill?

Answer _____ [1]

Total Question 3

[Turn over



Examiner Only	
Marks	Remark

(i) Draw a bar chart for this data. [3]

(ii) What number of pets is the mode?

Answer _____ [1]

- Complete the frequency table below.

[2]

[Turn over

5 (a) How many golf balls, costing £2.99 each, can Michael buy for £20?

Answer _____ [2]

(b) His friend John buys 4 of these golf balls. How much change does he get from £20?

Answer £_____ [2]

Examiner Only	
Marks	Remark
Total Question 5	

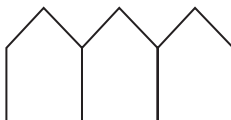


Examiner Only

Marks	Remark
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[illegible]

Shape 4



[1]

[1]

Shape	1	2	3	4	5
Number of matches	5	9	13	—	—

[Turn over

7 (a) Which metric unit is the most suitable to measure

(i) the distance from Belfast to Dublin,

Answer _____ [1]

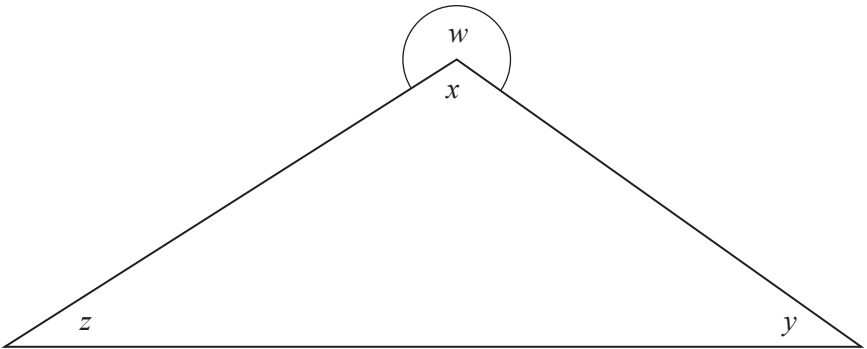
(ii) the weight of an onion,

Answer _____ [1]

(iii) the capacity of a large carton of milk?

Answer _____ [1]

(b)



From the diagram above write down the letter of an angle which is

(i) acute,

Answer _____ [1]

(ii) obtuse.

Answer _____ [1]

Examiner Only

Marks Remark

Total Question 7



15 17 10 18 49 12 38 120 125

From the numbers above write down

- (a) a square number,

Answer _____ [1]

- (b) the factors of 60,

Answer _____ [2]

- (c) a cube number,

Answer _____ [1]

- (d) a prime number.

Answer _____ [1]

Examiner Only	
Marks	Remark
Total Question 8	

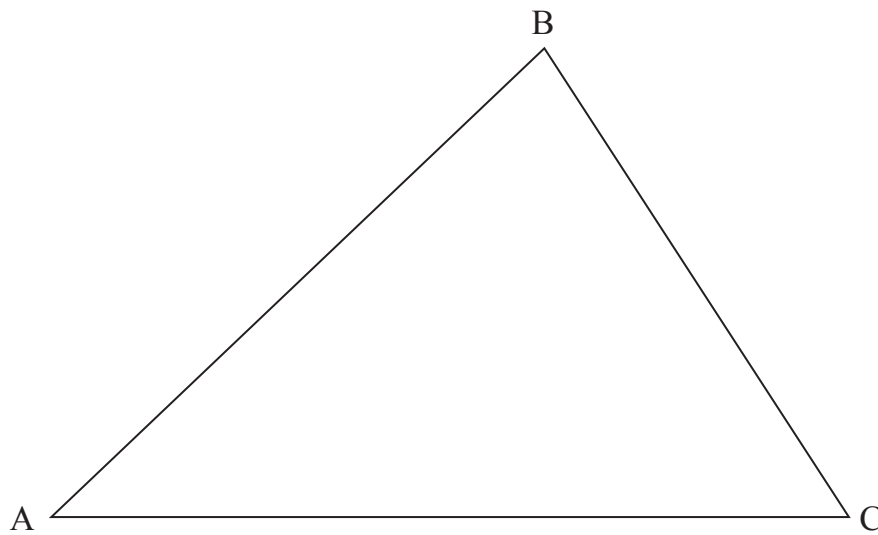
[Turn over



9 (a) Mark the mid-point of the line VW with an X.

V _____ W [1]

(b)



In the triangle ABC measure

(i) the length of AC,

Answer _____ cm [1]

(ii) the size of angle BAC.

Answer _____ ° [1]

Examiner Only	
Marks	Remark
Total Question 9	



A coordinate plane with x and y axes. The x-axis is labeled from -3 to 4, and the y-axis is labeled from -2 to 2. Point P is located at (3, 1) and Point Q is located at (-1, -2).

- P (____, ____), Q (____, ____) [2]

- (b)** Plot the point R (0, 2) on the diagram. [1]

Examiner Only	
Marks	Remark
Total Question 10	

[Turn over

Examiner Only	
Marks	Remark
Total Question 11	

- (a)** Calculate the mean score.

Answer _____ [3]

- Answer _____ [2]

- _____ because _____
- _____
- _____ [2]

- | Examiner Only | |
|-------------------|--------|
| Marks | Remark |
| | |
| Total Question 12 | |
| | |

(b) The table shows temperatures at 8 am and 8 pm in different parts of the world.

	Temperature at 8am in °C	Temperature at 8pm in °C
Dubai	18	14
London	8	−2
Alaska	−6	−13
Sydney	26	20

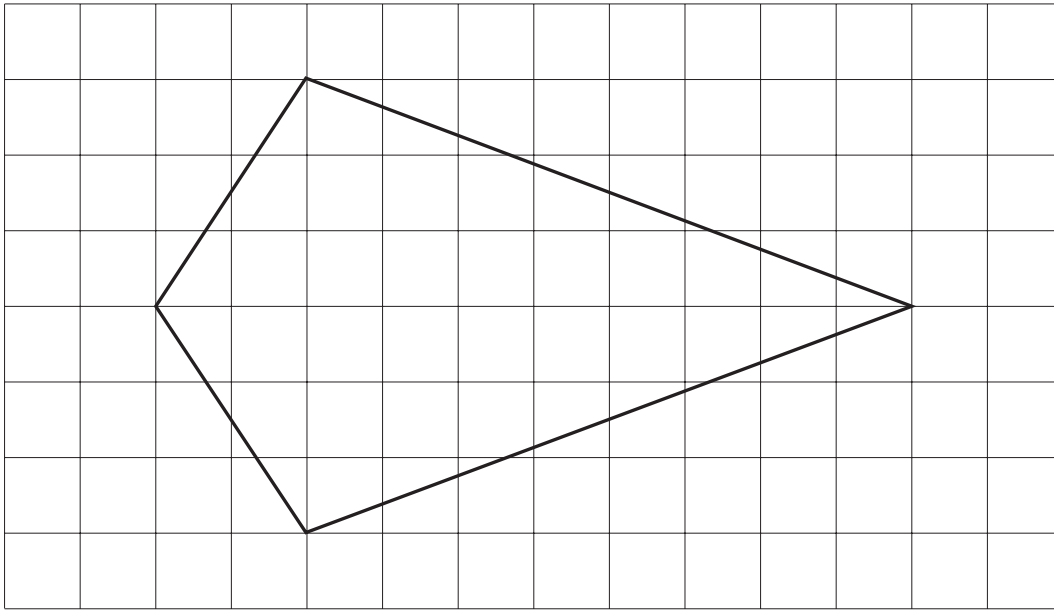
- Answer _____ °C [2]

- Answer _____ °C [2]

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Marks	Remark
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(b) Find the volume of a shoebox measuring 30 cm by 20 cm by 10 cm.



Total Question 13

How many more centimetres does she jump in the second round?

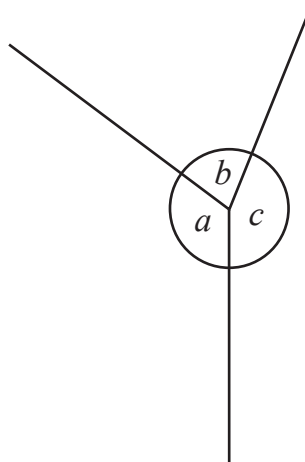
(b) Calculate, giving your answers in decimal form

Answer _____ [1]

Answer _____ [1]

[Turn over

15 (a) What is the sum of the three angles a , b , c drawn below?



Answer _____ ° [1]

(b) Calculate the size of angle x in the diagram below.

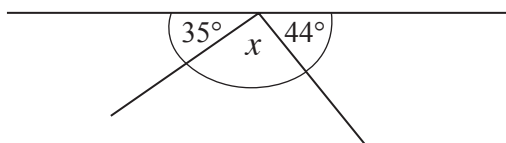


Diagram not drawn accurately

Answer $x = \underline{\hspace{2cm}}$ ° [2]

Examiner Only	
Marks	Remark
Total Question 15	



16 (a) Solve the following equations

(i) $4x = 28$

Answer $x =$ _____ [1]

(ii) $x - 3 = 17$

Answer $x =$ _____ [1]

(iii) $3x + 11 = 17$

Answer $x =$ _____ [2]

(b) Simplify $3b - 2g + 4b + 7g$

Answer _____ [2]

Examiner Only	
Marks	Remark
Total Question 16	

[Turn over



Ages of 24 people taking a car driving test

1		5	7	7	8	8	8	9				
2		0	0	0	0	1	2	3	5	7	7	
3		2	2	4	6	6						
4		1	2									

Key: 3 | 2 = age 32

- (a) One age has been recorded inaccurately. Put an **X** through the inaccurate age and give a reason for your answer.

Reason _____ [1]

- (b)** The test centre manager says, “The range of ages of those who sat the test was 28”. Use this information to make the stem and leaf diagram correct. [1]

Examiner Only	
Marks	Remark
Total Question 17	



18 Write in the missing numbers.

(a) $\sqrt{2.25}$ + = 4

[1]

(b) $\square - 3^3 = 11$

[1]

(c) $\frac{3}{0.5^2} = \boxed{}$

[1]

Examiner Only	
Marks	Remark
Total Question 18	

[Turn over



Answer _____ [1]

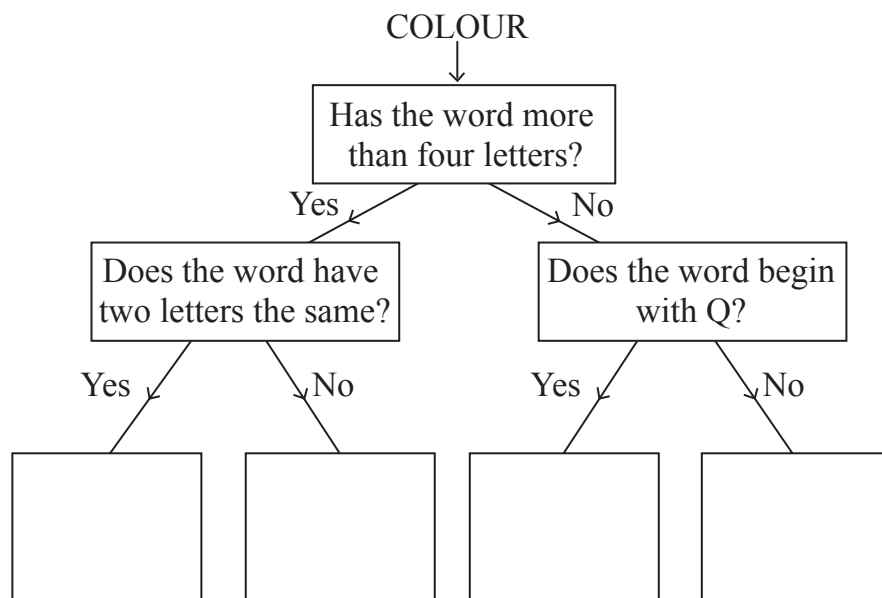
What is the actual distance between the two lighthouses?

Answer _____ km [3]

Examiner Only	
Marks	Remark
Total Question 19	

20 Use the decision tree to write the colours in the correct boxes.

WHITE



[2]

Examiner Only	
Marks	Remark
Total Question 20	

[Turn over



Examiner Only	
Marks	Remark
Total Question 21	

Answer _____ by £ _____ [4]

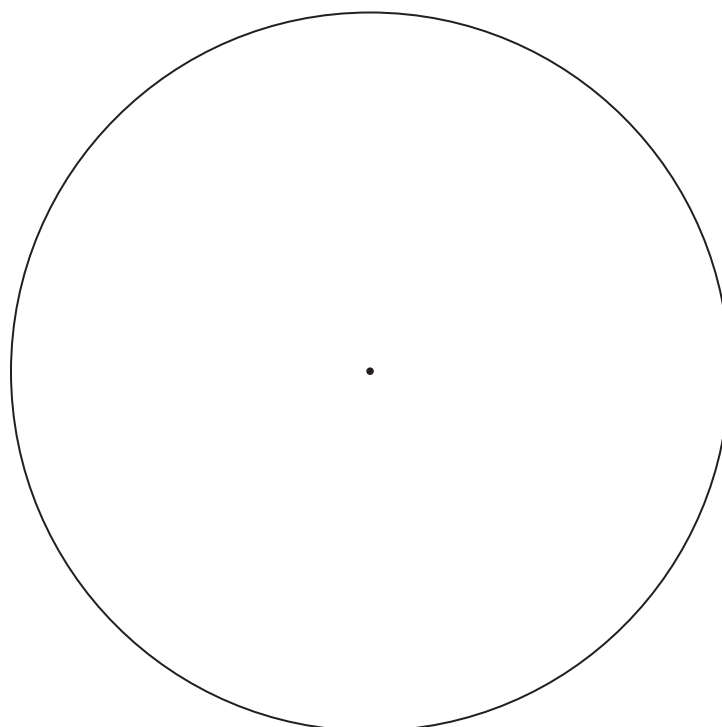
Total Question 21

22 (a) Show how to work out $\frac{7}{12} - \frac{1}{2}$ if you do not have a calculator.

(b) The following table gives the numbers of the pets owned by a group of primary school children.

Pet	Dog	Cat	Rabbit	Guinea Pig
Number of children	55	35	20	10
Angle				

Draw a pie chart to illustrate this data.



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Marks	Remark
Total Question 22	

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- A _____ B [2]

Total Question 23

24 Calculate the size of angle x in the kite below.

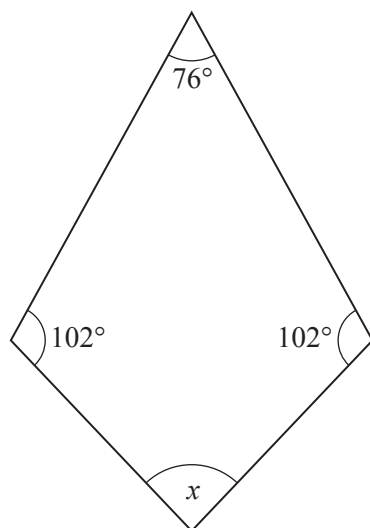


Diagram not
drawn accurately

Answer $x =$ _____ $^{\circ}$ [2]

THIS IS THE END OF THE QUESTION PAPER

Examiner Only	
Marks	Remark
Total Question 24	



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For Examiner's use only	
Question Number	Marks
1	
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QWC	

Total Marks	
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Examiner Number

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