



General Certificate of Secondary Education
2024

Centre Number

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Candidate Number

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Mathematics

Unit M6 Paper 2
(With calculator)
Foundation Tier



[GMC62]

GMC62

MONDAY 3 JUNE, 10.45 am – 11.45 am

TIME

1 hour.

INSTRUCTIONS TO CANDIDATES

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

You must answer the questions in the spaces provided.

Do not write outside the boxed area on each page, on blank pages or tracing paper.

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

Answer **all sixteen** questions.

All working should be clearly shown in the spaces provided. 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 50.

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 and a protractor.

The Formula Sheet is on page 2.

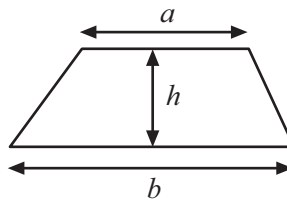
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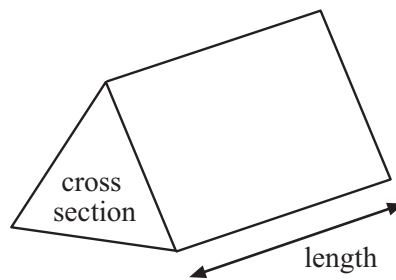
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Formula Sheet

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

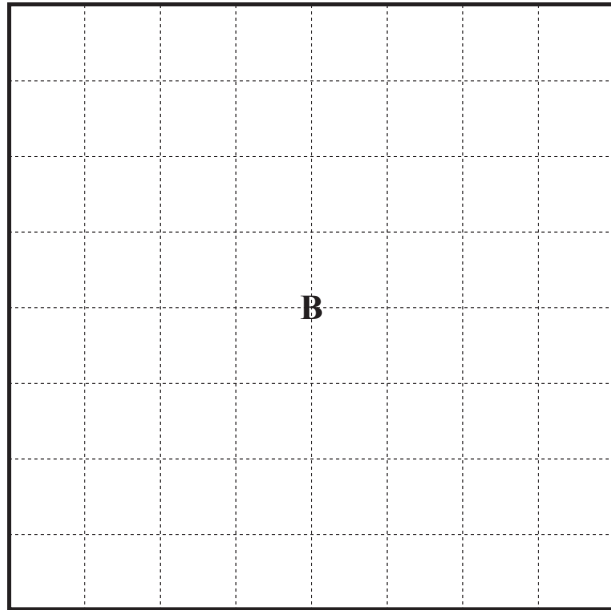
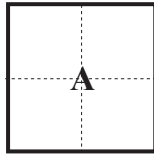


$$\text{Volume of prism} = \text{area of cross section} \times \text{length}$$



1 (a) Square A has been enlarged to Square B.

What is the scale factor of the enlargement?

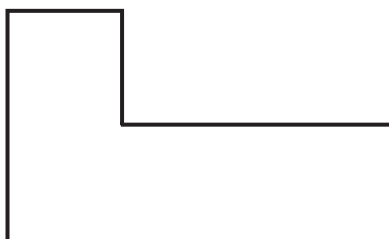


Answer _____ [1]

[Turn over



(b) Sammy enlarges the shape below.



This is Sammy's enlargement.



Which statement is correct?

- A Sammy's enlargement is correct.
- B We can't tell if Sammy's enlargement is correct as we don't know the scale factor used.
- C Sammy's enlargement is incorrect.

Answer _____ [1]



2 Morgan wants to have a heavy package delivered 28 miles.

She has two options.

Deliver it there
£35 for up to 20 miles, and £2.50 per extra mile

Ready to go local
£42.50, plus £9.50 for distances between 25 miles and 40 miles

Which is the cheaper option and by how much?

Answer _____ is cheaper by _____ [4]

[Turn over

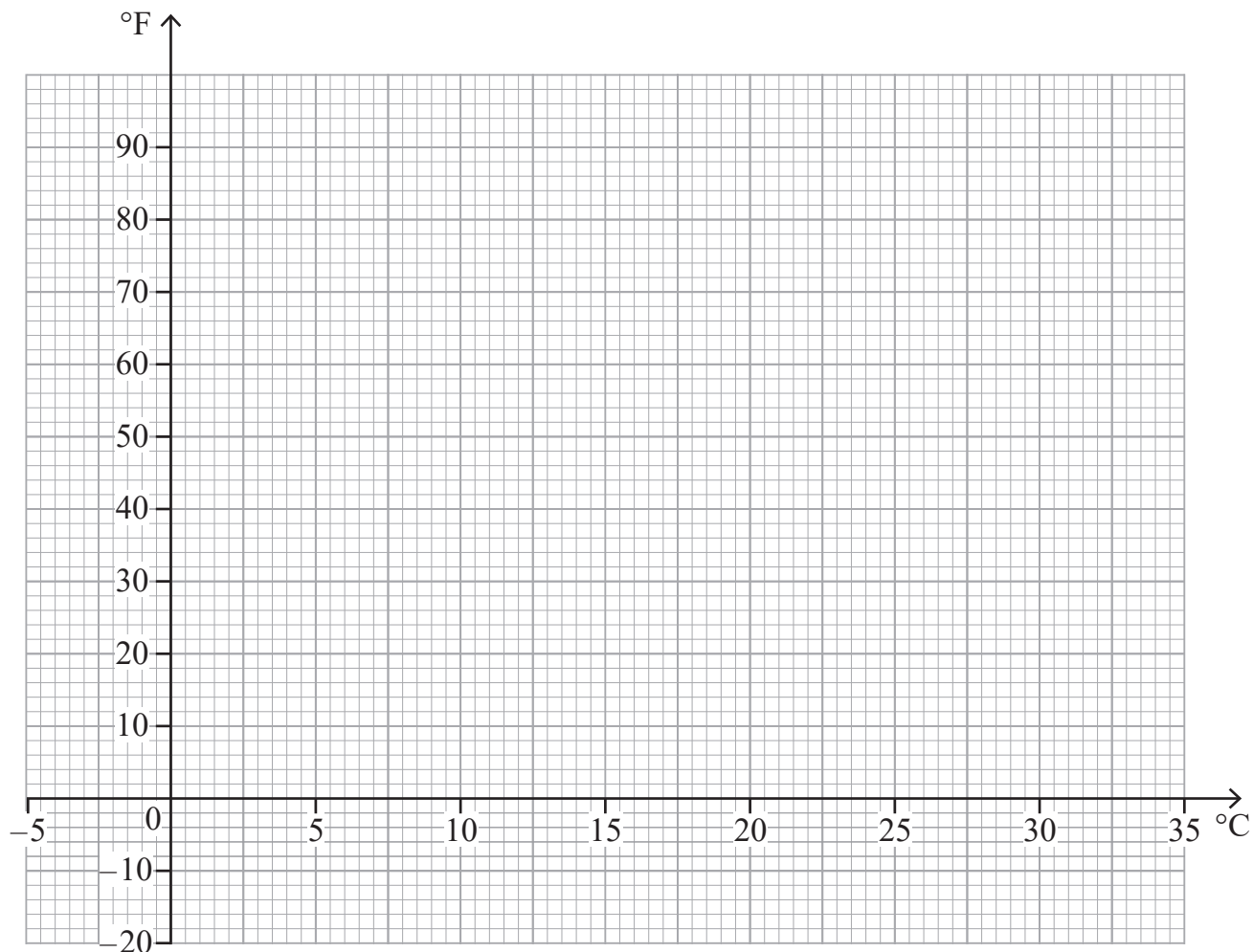


3 (a)

°C	-5	5	15	25	35
°F	23	41	59	77	95

Use the table to draw the conversion graph from °C (centigrade) to °F (Fahrenheit) on the grid below.

[3]



(b) Use your graph to convert 22 °C to °F.

Answer _____ °F [1]

(c) Use your graph to convert 27 °F to °C.

Answer _____ °C [1]



4 Each new number in a sequence is found using the rule

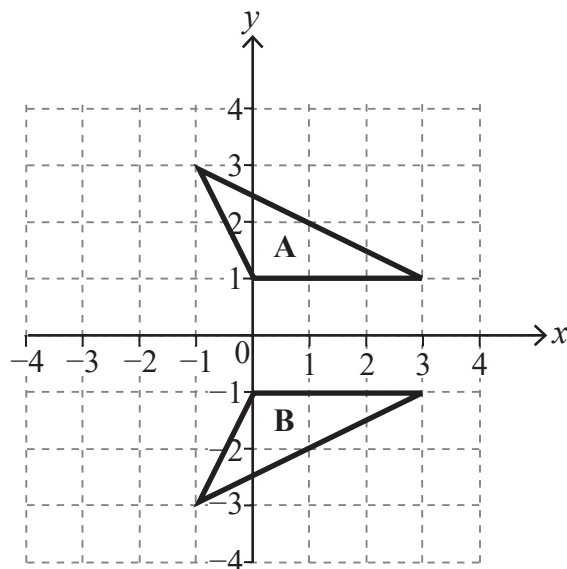
divide by 3 and then subtract 5

Find the next two numbers in this sequence.

24, _____, _____

[2]

5 Describe fully the **single** transformation that takes triangle A to triangle B.



Answer _____ [2]

[Turn over





Source: © Getty Images

Pete is filling 5-litre petrol cans from a large tank of petrol.

The tank contains 16 gallons.

Pete knows that 1 gallon = 4.5 litres.

How many 5-litre cans does he need to empty the tank?

Answer _____ cans [2]



7 Jack ran 4 km each day during the month of June.

He thinks he has run the length of 3 marathons.

A marathon is 26.2 miles long.

Is he right?

Explain your answer.

Answer _____ because _____

[4]

[Turn over



8 The heights (in cm) of students in a Year 1 class are recorded in the table below.

	$90 \leq h < 95$	$95 \leq h < 100$	$100 \leq h < 110$
Girl	6	5	2
Boy	4	7	6

A student is taken at random from the class.

(a) What is the probability of taking

(i) a girl with height $100 \leq h < 110$,

Answer _____ [1]

(ii) a boy,

Answer _____ [1]

(iii) a student with height $90 \leq h < 95$,

Answer _____ [1]

(iv) a girl with height $90 \leq h < 100$?

Answer _____ [1]



(b) An event is held for Year 1 students.

600 Year 1 students attend.

Estimate how many of the students have height $100 \leq h < 110$

Answer _____ [2]



9 The number of oysters collected by divers for a number of dives is recorded.

Name	Number of dives	Number of oysters collected
Diving Dan	16	84
Scuba Sam	11	33
Clammy Colin	24	102

Which diver is the best at collecting oysters?

Show your working clearly.

Answer _____

because _____ [2]



10 Work out the value of x in the pentagon below.

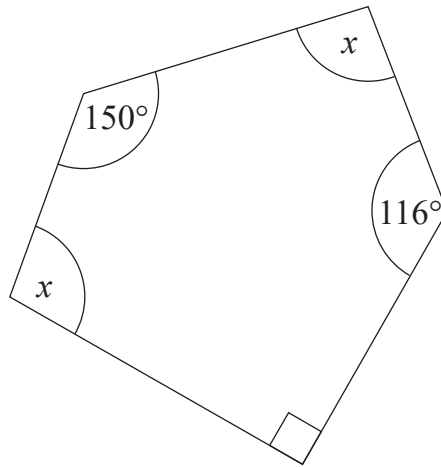


diagram not
drawn
accurately

Answer $x =$ _____ $^\circ$ [4]

[Turn over



11 In a local election the following figures were recorded at three polling stations.

Station	Number who voted	Number registered to vote
A	645	1270
B	860	1548
C	1450	3015

Of the total number of those registered to vote, what percentage voted?

Answer _____ % [3]



12 Tammy makes cordial using fruit juice and sparkling water in the ratio 1:3

Tammy has 800 ml of fruit juice and 2100 ml of sparkling water.

What is the greatest amount of cordial she can make?

Answer _____ ml [3]



13 Sarah rolls a fair dice and tosses a fair coin.

What is the probability that she gets a number less than 5 and a Head?

Show your working out.

Answer _____ [2]

14 $x^a \times x^4 = x^{12}$

Find the value of a .

Answer $a =$ _____ [1]

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16 There are 200 students in Year 8 and 160 students in Year 9

There are 120 girls in Year 8 and 100 girls in Year 9

The probability that a girl plays a musical instrument is 0.3

The probability that a boy plays a musical instrument is 0.25

A student is taken at random from the students who play a musical instrument.

What is the probability that it is a boy?

Answer _____ [4]

THIS IS THE END OF THE QUESTION PAPER





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Question Number	Marks
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Total Marks	
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Examiner Number

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