



General Certificate of Secondary Education
January 2011

Centre Number

71

Candidate Number

Mathematics

Module N5 Paper 2
(With calculator)
Foundation Tier

[GMN52]

FRIDAY 14 JANUARY

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.

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 56.

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.

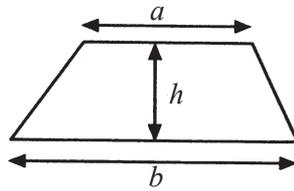
For Examiner's
use only

Question Number	Marks
1	
2	
3	
4	
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10	
11	
12	

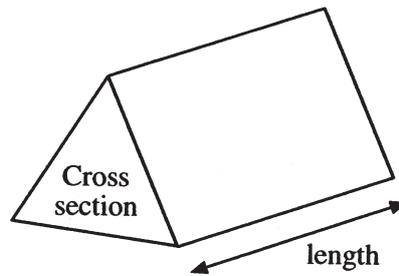
Total
Marks

Formula Sheet

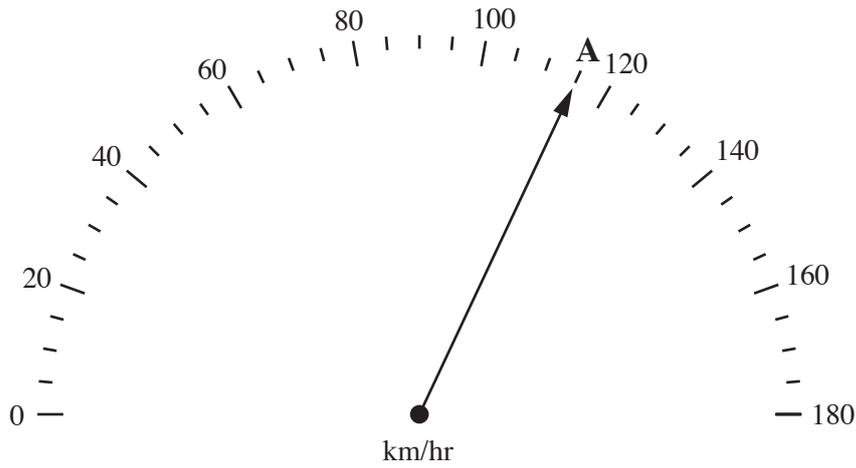
Area of trapezium = $\frac{1}{2}(a + b)h$



Volume of prism = area of cross section \times length

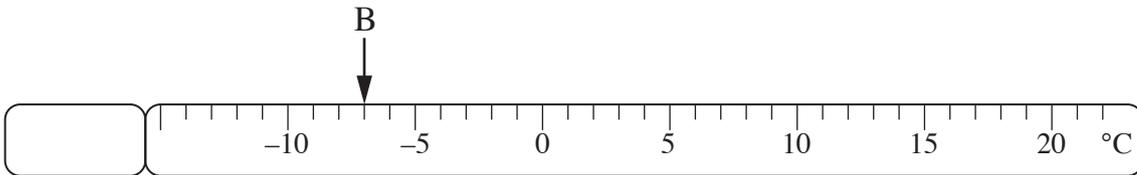


1 (a) What speed is indicated on the speedometer at A?



Answer _____ km/h [1]

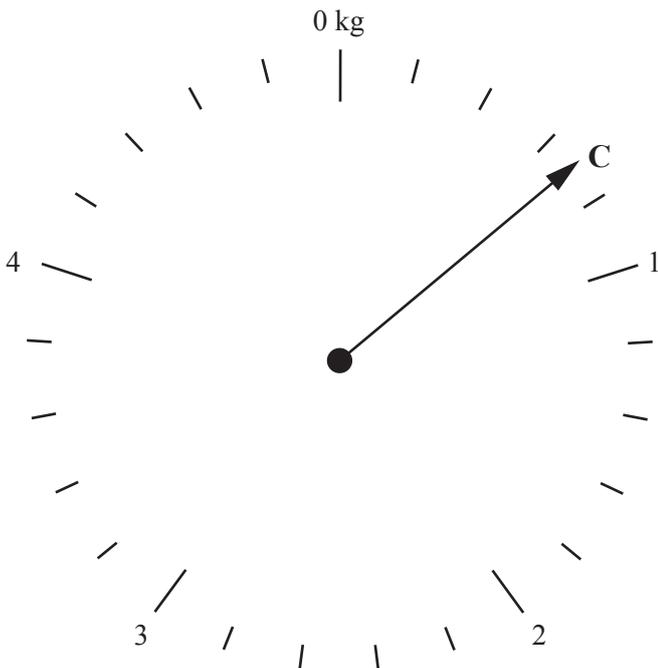
(b) What temperature is indicated on the thermometer at B?



Answer _____ °C [1]

(c) (i) The scales below can measure up to 5 kg.

What weight, in **grams**, is indicated on the scales at C?



Answer _____ g [1]

(ii) Draw an arrow to show 2.1 kg.

[1]

Examiner Only	
Marks	Remark

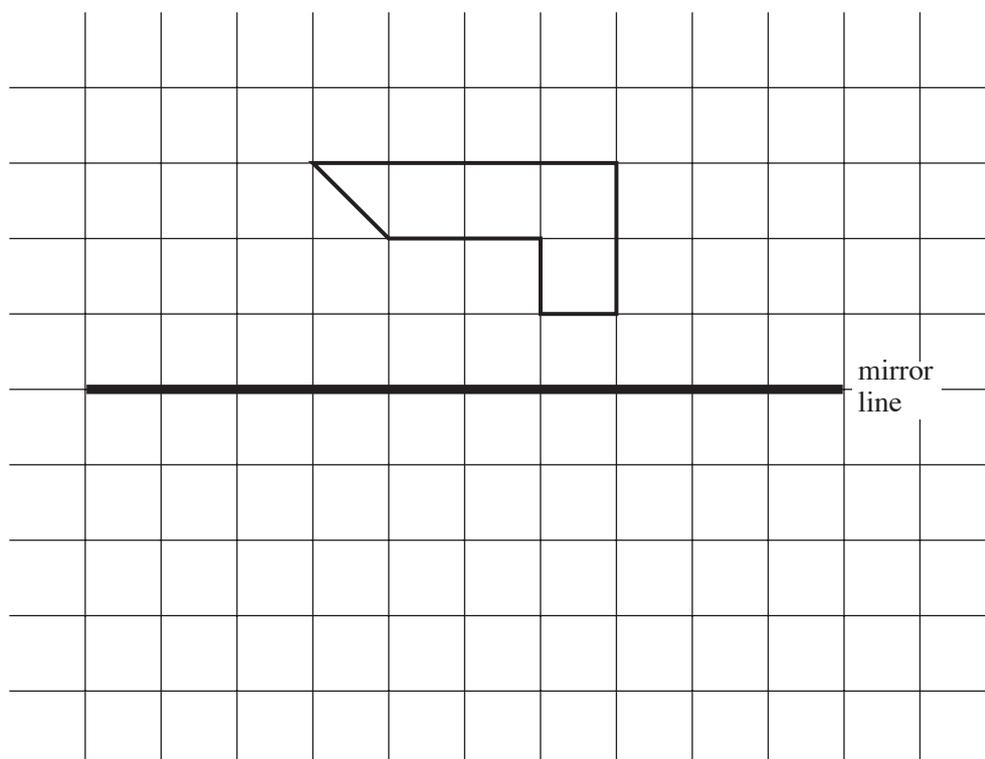
- 2 (a) Mae's basic rate of pay is £7.90 per hour. On Saturday she gets $1\frac{1}{2}$ times her basic rate of pay.
Mae worked 20 hours altogether from Monday to Friday and 4 hours on Saturday.
Calculate Mae's pay for the week.

Answer £ _____ [4]

- (b) That same week Joe worked 6 hours each day on Tuesday, Wednesday, Thursday and Friday. Joe earns £8.50 per hour.
Who earned more and by how much?

Answer _____ earned _____ more [3]

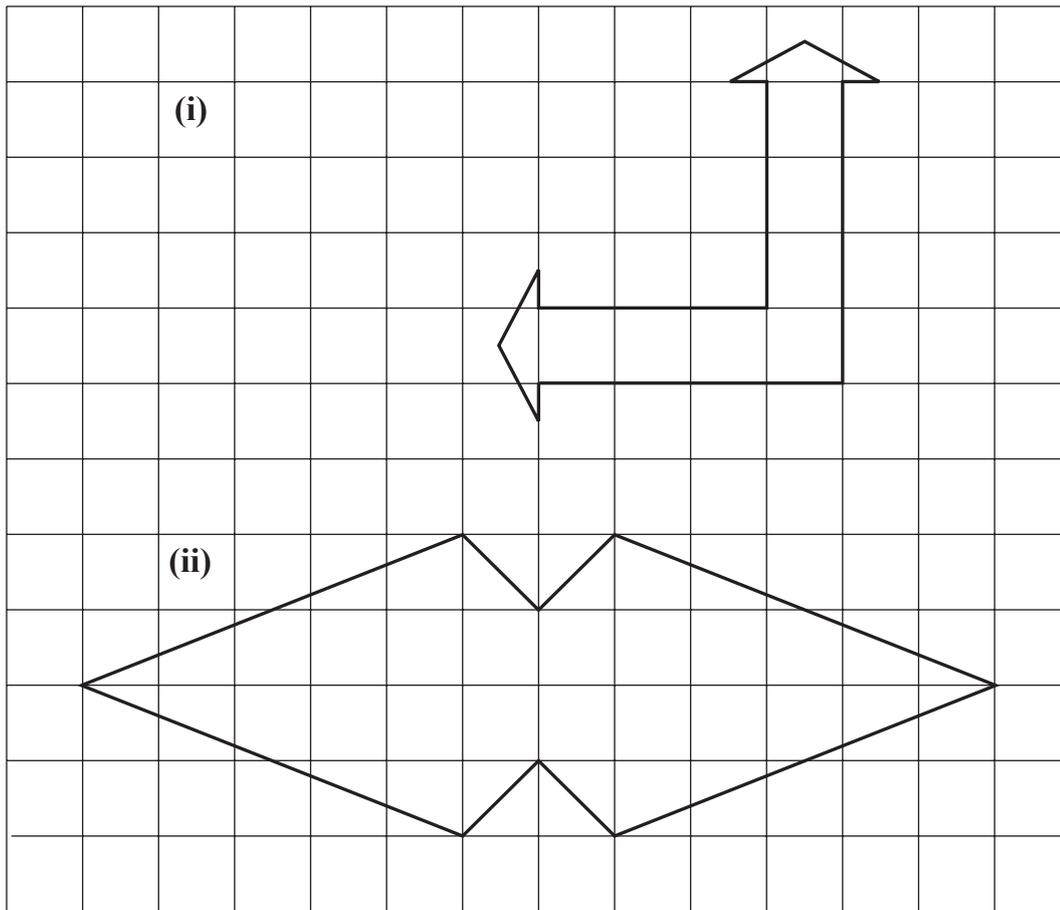
- 3 (a) Draw the reflection of the shape in the mirror line. [2]



Examiner Only	
Marks	Remark

(b) Draw all lines of symmetry on each of the shapes shown below.

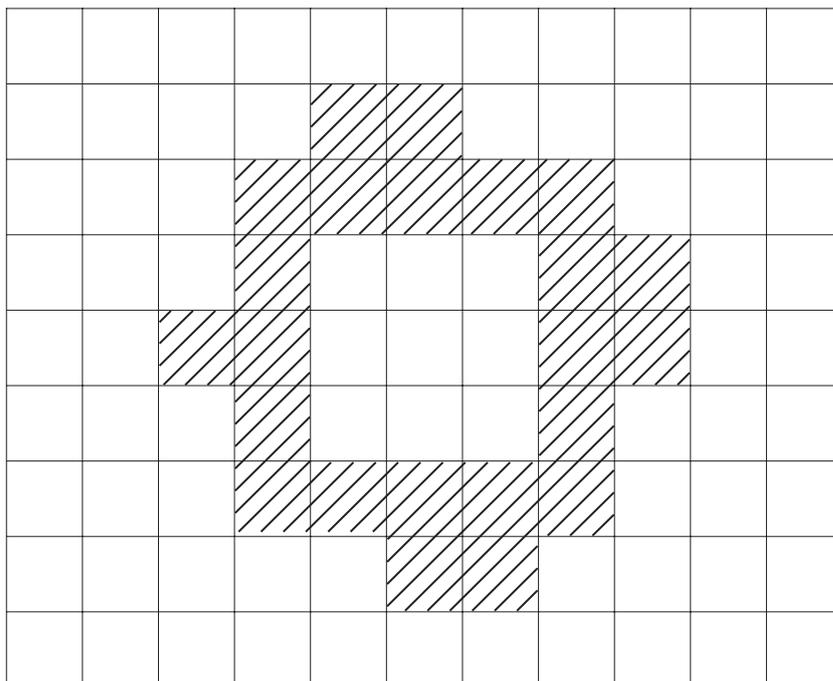
Examiner Only	
Marks	Remark



[1]

[1]

(c) Shade one square to give the figure below rotational symmetry.



[1]

- 4 (a) The cost of hiring a Power Washer for a number of days from “Tools For U” is calculated using the formula

$$\text{Hire Charge (£)} = 25 + 45 \times \text{Number of Days}$$

- (i) Calculate the cost of hiring a Power Washer for 3 days.

Answer £ _____ [2]

- (ii) What is the maximum number of days you could hire the Power Washer for if you had £300?

Answer _____ [2]

- (b) The mean “M” of two numbers X and Y can be calculated using the formula

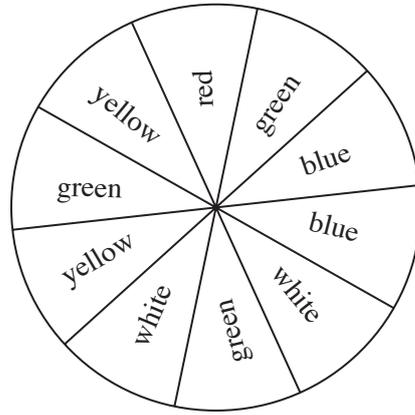
$$M = \frac{X + Y}{2}$$

Calculate M when X = 4.6 and Y = 6.2

Answer _____ [2]

Examiner Only	
Marks	Remark

5 (a)



Which colour is the spinner

(i) least likely to land on?

Answer _____ [1]

(ii) most likely to land on?

Answer _____ [1]

(b) 100 tickets numbered from 1 to 100 were sold in a raffle. Calculate the probability that a ticket numbered more than 40 will win the first prize.

Answer _____ [2]

(c) A bag contains 21 discs with a letter written on each of them. 9 have the letter A, 7 have the letter G and 5 have the letter W.

One disc is selected at random.

Calculate, in its simplest terms, the probability that it has the letter A.

Answer _____ [2]

Examiner Only	
Marks	Remark

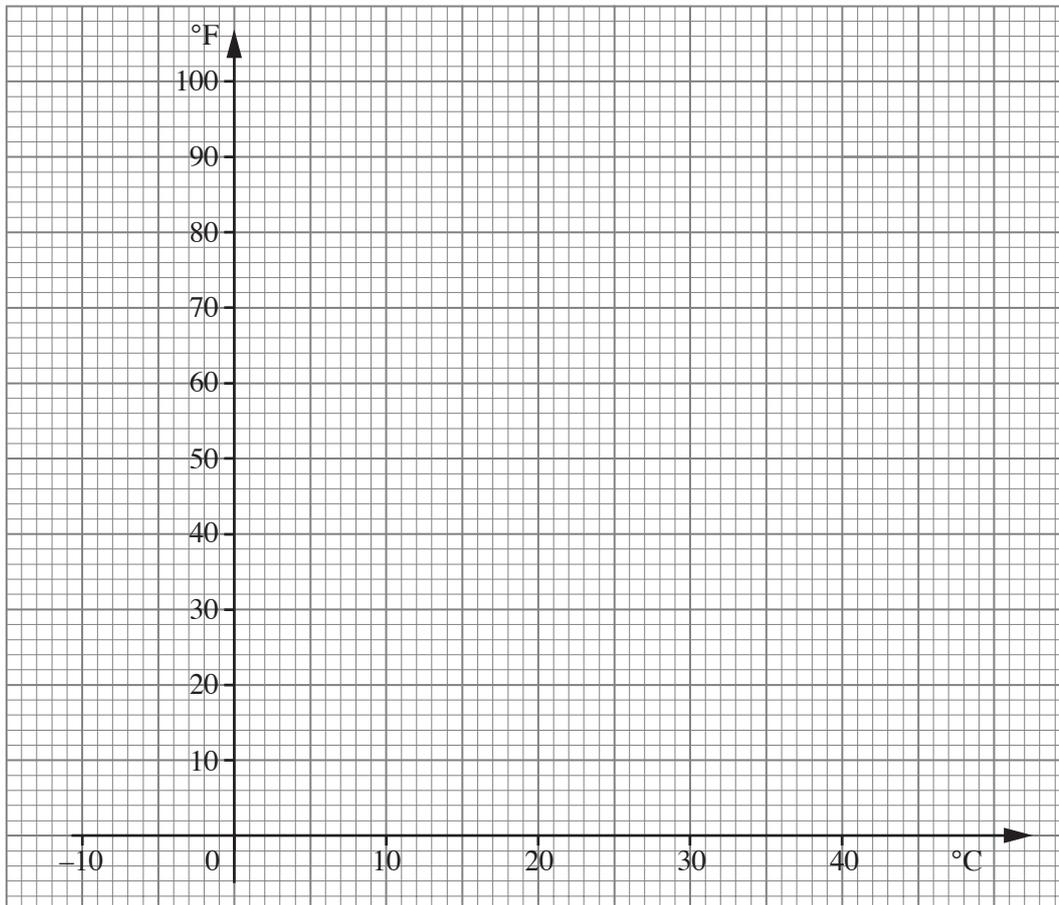
6

CONVERSION TABLE FROM CENTIGRADE (°C)
TO FAHRENHEIT (°F)

°C	-5	0	5	10	15	20	25	30	35	40
°F	23	32	41	50	59	68	77	86	95	104

(a) Draw the conversion graph below.

[3]



(b) Use your graph to convert

(i) 28°C to °F

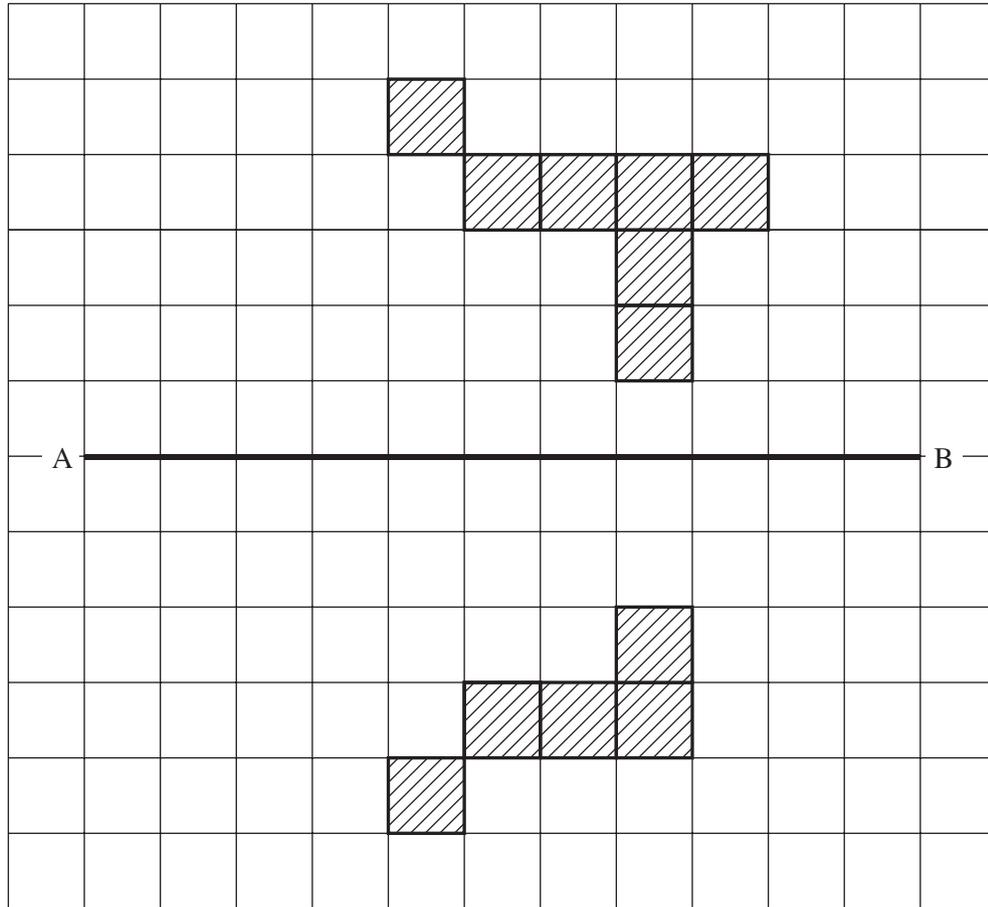
Answer _____ °F [1]

(ii) 55°F to °C

Answer _____ °C [1]

Examiner Only	
Marks	Remark

- 7 (a) Shade **two** squares on the diagram below so that AB is a line of symmetry.



[2]

(b) **M A T H S**

From the letters in the word above, choose

- (i) a letter with no lines of symmetry. Answer _____ [1]
- (ii) a letter with rotational symmetry of order 2. Answer _____ [1]
- (c) The complete word below has one horizontal line of symmetry as shown.

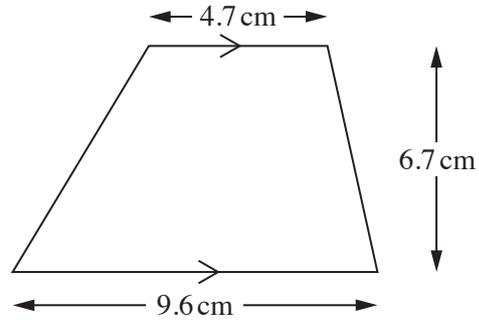
--C-O-D--

Write down another **three letter word** which has one horizontal line of symmetry.

Answer _____ [1]

Examiner Only	
Marks	Remark

8



Find the area of this trapezium.
Give your answer to an appropriate degree of accuracy.

Answer _____ cm^2 [3]

- 9 (a) Calculate the amount of an investment of £7200 at 4.5% simple interest per year after 2 years.

Answer £ _____ [3]

- (b) A car costs 1.5 million yen in Japan.

If one euro = 135.457 yen, calculate the cost of the same car in euro.

Give your answer to the nearest euro.

Answer _____ euro [3]

Examiner Only	
Marks	Remark

- 10 The table below shows some of the probabilities of getting a colour on a spinner with four colours.

Colour	Red	Blue	Green	Black
Probability	0.3	0.5	0.14	

Calculate the probability of getting

- (a) Black,

Answer _____ [2]

- (b) Green or Blue.

Answer _____ [2]

- 11 Using ruler and compasses only, construct the perpendicular bisector of the line PQ.
Show your construction lines.



[2]

12 The angles in a triangle are in the ratio of 4 : 5 : 6

Work out the sum of the two smaller angles.

Answer _____ ° [3]

THIS IS THE END OF THE QUESTION PAPER

Examiner Only	
Marks	Remark

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