



Rewarding Learning

General Certificate of Secondary Education  
2025

Centre Number

--	--	--	--	--

Candidate Number

--	--	--	--

# Mathematics

Unit M6 Paper 1  
(Non-Calculator)

Foundation Tier

[GMC61]



\*GMC61\*

WEDNESDAY 4 JUNE, 9.15am – 10.15am

### 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.**

Questions which require drawing or sketching should be completed using an HB pencil. All working **must** be clearly shown in the spaces provided. Marks may be awarded for partially correct solutions.

You **must not** use a calculator for this paper.

Answer **all eighteen** questions.

### 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 ruler, compasses and a protractor.

The Formula Sheet is on page 2.

15917



\*24GMC6101\*

# Formula Sheet

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



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





**BLANK PAGE**  
**DO NOT WRITE ON THIS PAGE**  
**(Questions begin overleaf)**

**[Turn over**

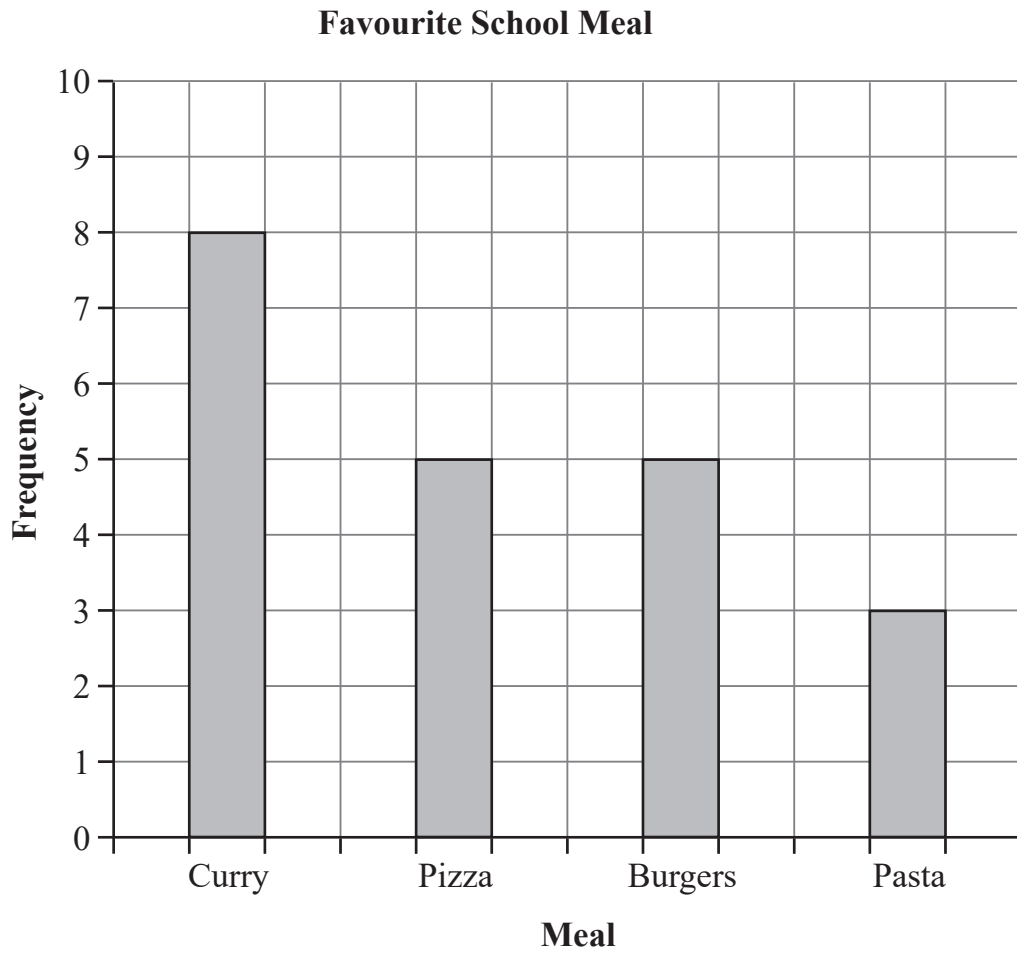
15917



\*24GMC6103\*

1 Andy asks his classmates what their favourite school meal is.

He displays their answers in a bar chart.



Andy asks one of his classmates at random about their choice.

- (a) What is the probability that they say pasta is their favourite school meal?

Give your answer as a fraction.

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

- (b) Is his classmate more likely to have chosen pizza or burgers as their favourite school meal?

**Explain your answer clearly.**

Answer \_\_\_\_\_

\_\_\_\_\_

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

[Turn over



2 Tick [✓] the correct box to show the best unit to measure each of the following.

(a) The time taken to boil an egg.

Minutes

Hours

Days

[1]

(b) The distance travelled in a one-hour car journey.

Inches

Yards

Miles

[1]

(c) The mass of a large dog.

Grams

Kilograms

Tonnes

[1]



3 Terri buys

1 bag of crisps for £1.30

1 bar of chocolate for £1.40

2 packets of sweets at 75p each.

Terri pays with a £5 note.

Terri is given 80p change.

Is this the correct change?

**Explain your answer clearly.**

Answer \_\_\_\_\_ because \_\_\_\_\_

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

[Turn over



4 Eggs are sold in boxes of six.

Each box costs £1.75

Charlie needs 44 eggs.

How much will it cost Charlie to buy enough eggs?

Answer £ \_\_\_\_\_ [3]



5 A rectangular wall measures 4.7 metres by 2.9 metres.

Tiles cost £29.75 per square metre.

**Estimate** the cost to tile the wall.

**Show your working out clearly.**

Answer £ \_\_\_\_\_ [3]

[Turn over



6 How much bigger is 35% of £120 than  $\frac{1}{3}$  of £120?

Answer £ \_\_\_\_\_ [3]



7 (a) A square number and a cube number add together to give a total of 52

Write down the two numbers.

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

(b) Write down the triangular number between 40 and 50

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

[Turn over



8 Jackie chooses chips or mash or baby boiled potatoes for a side order.

The probability she chooses chips is 0.65

The probability she chooses mash is 0.2

What is the probability that Jackie chooses baby boiled potatoes?

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



9 (a) 2 cm represents 15 km on a map.

How many kilometres are represented by 12 cm on the map?

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

(b) A different map has a scale of 1: 25 000

John measures the distance between two points on this map to be 8 cm.

Is the actual distance, in km, between these two points greater than 10 km?

**Show your working out clearly.**

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

[Turn over



10 The ratio of girls to boys in an athletics club is 3:5

There are 45 **boys** in the club.

$\frac{1}{4}$  of the children are sprinters.

How many children are sprinters?

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



11 Hilary is ordering T-shirts for a school trip.

She has to pay a £60 design fee and an amount for each T-shirt.

The total cost of 40 T-shirts is £380

What is the **total** cost of 30 T-shirts?

Answer £ \_\_\_\_\_ [4]

[Turn over



12 (a) A bag contains 20 coloured marbles.

The marbles are coloured red, green, blue and orange.

Rosie says



When I take a marble from the bag at random, I think that, because there are four colours, the probability of it being red is  $\frac{1}{4}$

Explain why Rosie **might not** be correct in what she thinks.

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



(b) A different bag contains 20 coloured marbles.

The marbles are coloured red, green, blue and orange.

The bag has 2 red marbles and 7 green marbles.

The probability of choosing a blue marble is  $\frac{2}{5}$

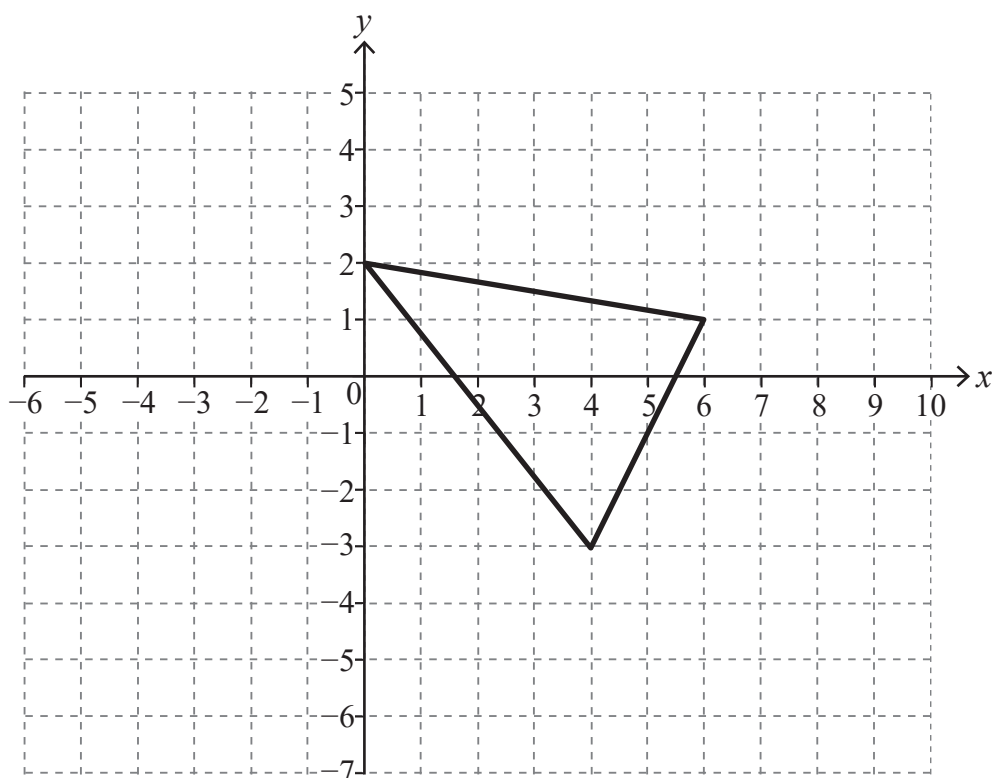
How many orange marbles are there in the bag?

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

[Turn over



- 13 (a) Draw the image of the triangle shown after a translation of 3 units left and 4 units down.



[2]

- (b) A different triangle, PQR, was translated 4 units right and 6 units down.

The **image** of the point P **after** this different translation is  $(8, -4)$

What were the coordinates of the original point P?

Answer ( \_\_\_\_\_ , \_\_\_\_\_ ) [2]



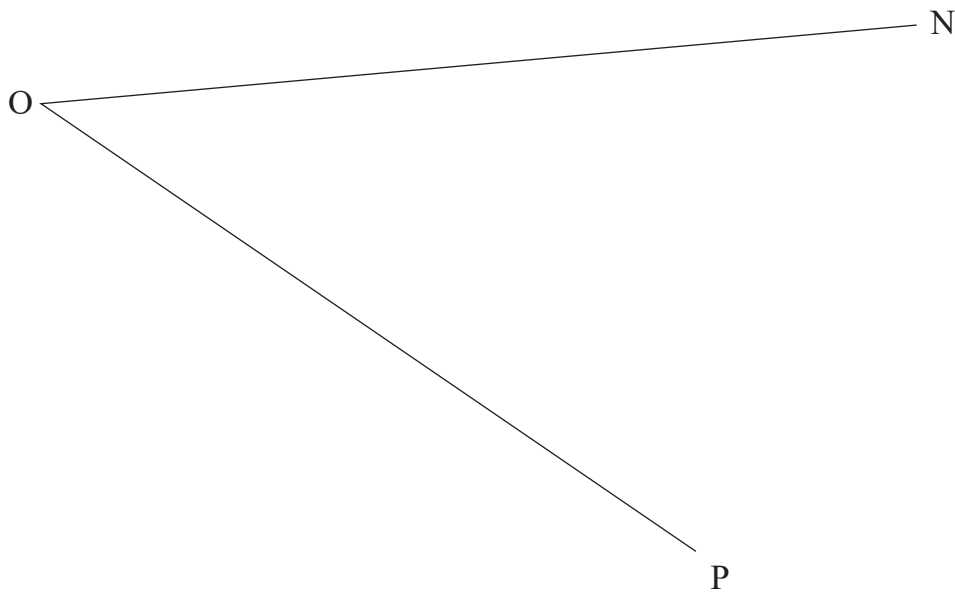
14 The exterior angle of a regular polygon is  $9^\circ$

How many sides has the polygon?

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

15 Using a ruler and compasses only, construct the bisector of the angle NOP below.

**Do not rub out your construction arcs.**



[2]

[Turn over



16 Jacqui and Gil each flip a coin a number of times.

Jacqui says, "The coin was 'Heads' 6 times out of 13, so I think it is a fair coin."

Gil says, "The coin was 'Heads' 15 times out of 32, so I think it is a fair coin."

Whose conclusion is more reliable?

**Explain your answer clearly.**

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



17 (a) Write the binary number 10111 as a decimal number.

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

(b) Write the decimal number 34 as a binary number.

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

[Turn over



18 A parallelogram is enlarged by scale factor 5

- (a) How many times bigger is the perimeter of the enlargement than the perimeter of the original?

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

- (b) How many times bigger is the area of the enlargement than the area of the original?

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

---

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

---





**BLANK PAGE**  
**DO NOT WRITE ON THIS PAGE**

15917



\*24GMC6123\*

**SOURCES:**

All images ©CCEA unless stated.

Question 12(a): © Getty Images

**DO NOT WRITE ON THIS PAGE**

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

<b>Total Marks</b>	
--------------------	--

Examiner Number

Permission to reproduce all copyright material has been applied for.  
In some cases, efforts to contact copyright holders may have been unsuccessful and CCEA will be happy to rectify any omissions of acknowledgement in future if notified.

