

# GCSE Maths

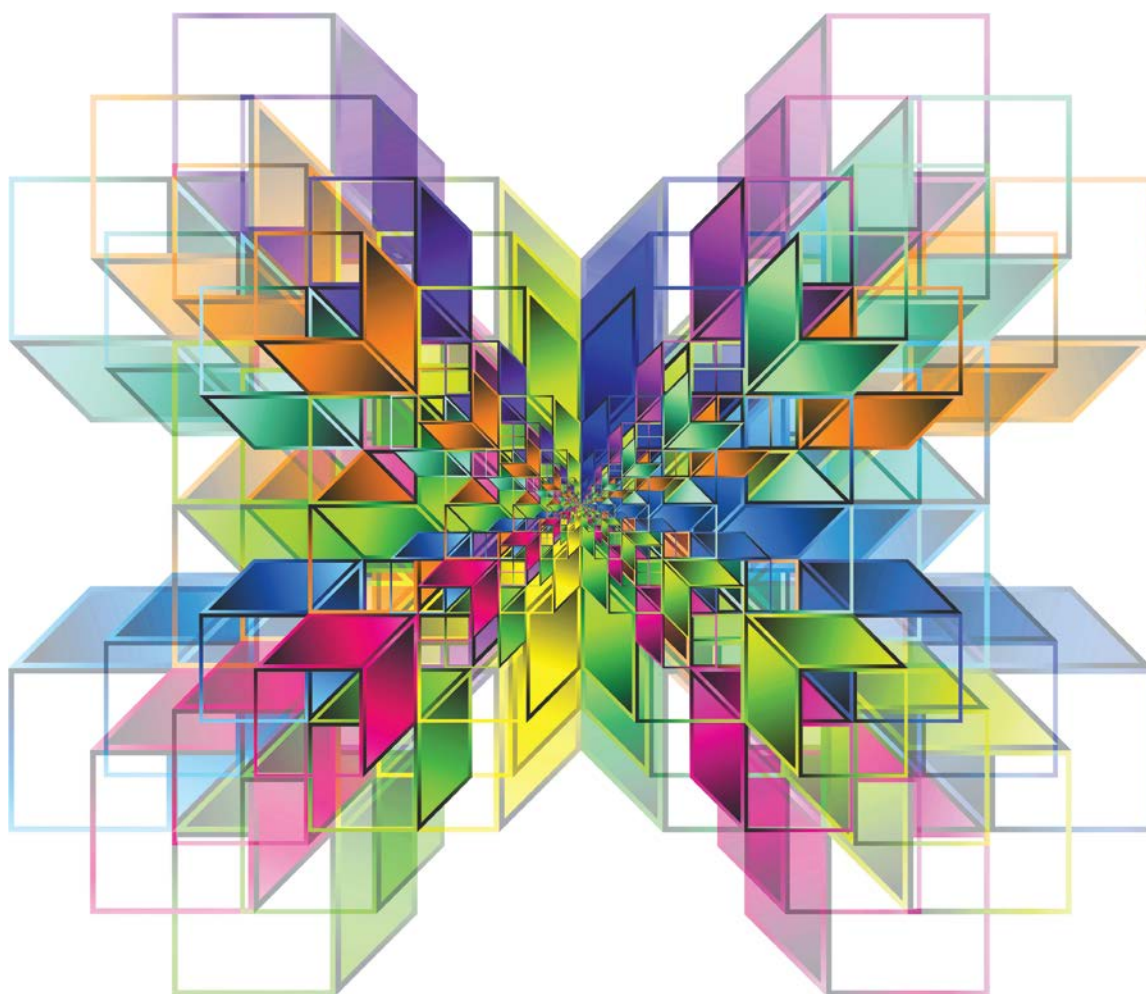
---

**Summer hub schools network meeting**

Example questions

---

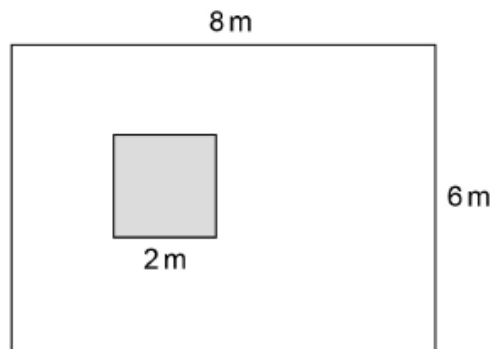
Published: Summer 2019





## 2018 Foundation Paper 1 (R3, A02)

- 7** A rectangular carpet measures 8 m by 6 m  
Part of the carpet is covered by a square rug of length 2 m



Not drawn accurately

Show that  $\frac{1}{12}$  of the carpet is covered by the rug.

**[2 marks]**

## 2018 Foundation/Higher Paper 1 Q25/6 (R3, A02)

- 25** The height of Zak is 1.86 metres.  
The height of Fred is 1.6 metres.  
Write the height of Zak as a fraction of the height of Fred.  
Give your answer in its simplest form.

**[3 marks]**

## 2018 Foundation Paper 1 Q22 (R4, A03)

- 22** Anna plays a computer game.  
Each game is a win or a loss.  
She wins three quarters of her first 24 games.  
She then wins her next 12 games.  
For all 36 games, work out the ratio wins : losses  
Give your answer in its simplest form.

**[3 marks]**

## 2018 Foundation Paper 1 Q24 (R5, A01)

- 24** Divide 405 in the ratio 4 : 11

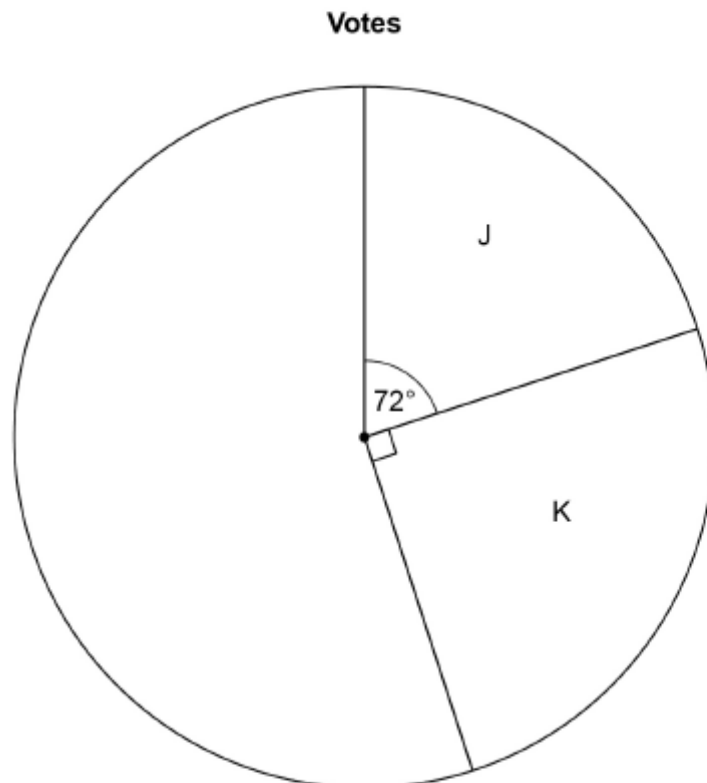
**[3 marks]**

## 2018 Foundation Paper 3 Q19a (R6, A01)

**19** In an election there were four candidates, J, K, L and M.

Fran is drawing a pie chart to show the results.

The sectors for J and K have been drawn.



**19 (a)** Twice as many people voted for L as voted for M.

Complete the pie chart.

**[3 marks]**

## 2018 Foundation Paper 2H Q3 (R6, A02)

**3**  $y$  is  $1\frac{1}{2}$  times  $x$ .

Circle the ratio that is equivalent to  $y : x$

**[1 mark]**

2 : 5

5 : 2

3 : 2

2 : 3

## 2018 Foundation/Higher Paper 2 Q26/8 (R7, A03)

- 8 Theo starts with savings of £18  
James starts with no savings.

Each week from now,

Theo will save £4.50 and James will save £4

In how many weeks will Theo and James have savings in the ratio 15 : 8 ?

[3 marks]

## 2018 Higher Paper 1H Q14 (R5, A02)

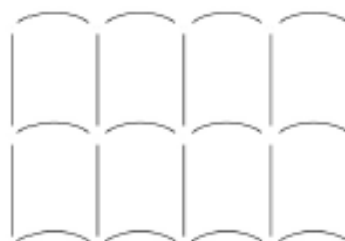
- 14 Patterns are made using straight lines and arcs.

14 (a)

**Pattern A (one row)**



**Pattern B (two rows)**



More rows are added to **Pattern B** so that

number of straight lines : number of arcs = 10 : 9

How many rows are added?

[2 marks]

- 14 (b) A different pattern is made using 20 straight lines and 16 arcs.  
The straight lines and arcs are made from metal.

20 straight lines cost £12

cost of one straight line : cost of one arc = 2 : 3

Work out the **total** cost of the metal in the pattern.

[3 marks]

## 2018 Foundation Paper 3 Q5b (R9, A02)

5 (b) Shade 10% of this grid.

[1 mark]

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## 2018 Foundation Paper 1 Q19 (R9, A01)

19 Circle the percentage that is closest in value to  $\frac{1}{3}$

[1 mark]

30%

33%

33.3%

33.4%

## 2018 Higher Paper 2 Q4 (R9, A01)

4 Work out 40 as a percentage of 10  
Circle your answer.

[1 mark]

4%

25%

300%

400%

## 2018 Foundation Paper 1 Q5 (R9, A01)

5 Work out 20% of 14 000

[2 marks]

## 2018 Foundation/Higher Paper 2 Q24/Q6 (R9, A03)

6 The table shows information about the population of a city.

| Population in 2001 | Population in 2011 |
|--------------------|--------------------|
| 420 000            | 480 000            |

Liam claims,

“From 2011 to 2021 the population of the city will increase by the same percentage as from 2001 to 2011”

He works out,

$$\begin{aligned}\text{population increase from 2001 to 2011} &= 480\,000 - 420\,000 \\ &= 60\,000\end{aligned}$$

$$\begin{aligned}\text{population in 2021} &= 480\,000 + 60\,000 \\ &= 540\,000\end{aligned}$$

Does the population of 540 000 match his claim?

You **must** show your working.

[3 marks]

## 2018 Foundation/Higher Paper 3 Q28/Q9 (R9, A03)

28 The cost of a ticket increases by 10% to £19.25

Work out the original cost.

[3 marks]

## 2018 Foundation Paper 1 Q18 (R2, A01)

18 Circle the ratio which is the same as the scale 1 cm represents 1 km

[1 mark]

1 : 100

1 : 1000

1 : 10 000

1 : 100 000

## 2018 Foundation Paper 3 Q4 (R1, A01)

4 Circle the shortest length.

[1 mark]

1200 cm

0.13 km

110 m

140 000 mm

---

## 2018 Foundation Paper 2 Q9 (R1, A03)

- 9** In this question, use  
1 foot = 12 inches  
1 inch = 2.5 centimetres
- Change 5 feet 8 inches to centimetres.

[3 marks]

## 2018 Foundation Paper 3 Q4 (R1, A01)

- 12** How many minutes are there in  $5\frac{1}{4}$  hours?
- Circle your answer.

[1 mark]

315

325

515

525

## 2018 Higher Paper 1 Q13 (R1/R11, A01)

- 13** Circle the volume that is the same as  $15\text{ cm}^3$

[1 mark]

$15\,000\text{ mm}^3$

$1.5\text{ mm}^3$

$0.0015\text{ mm}^3$

$150\text{ mm}^3$



---

# Notes

---

## Notes



---

## Contact us

T: 0161 957 3852

E: [maths@aqa.org.uk](mailto:maths@aqa.org.uk)

[aqa.org.uk](http://aqa.org.uk)