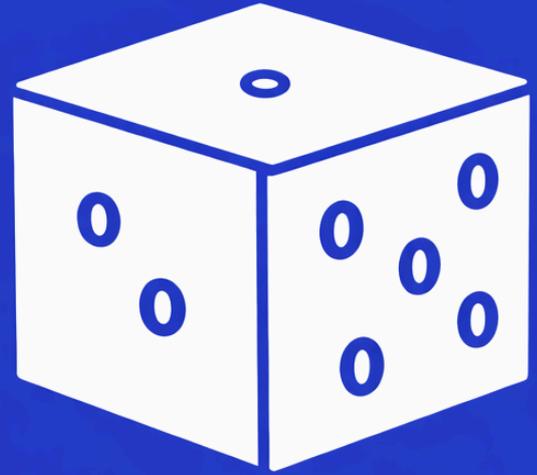


GCSE Foundation Worked Solutions

Paper 2b
Non-Calculator

LUCKY MATHS



More papers



Solutions



Instructions

Use black ink or ball-point pen.

Draw diagrams in pencil.

Write your answers in the spaces provided and show all working.

The total mark for this paper is 40



Materials

Black pen

Pencil

Ruler

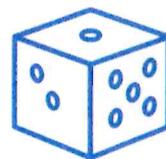
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Answer ALL questions.
Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Work out $150 \div 3$.

.....50.....

(Total for Question 1 is 1 mark)

2 Complete the statement.

$$1\text{ m} = 100\text{ cm}$$

4 metres =400.....centimetres

(Total for Question 2 is 1 mark)

3 What percentage of the squares are shaded?



$$\frac{4}{8} = \frac{1}{2} = 50\%$$



.....50%.....

(Total for Question 3 is 1 mark)

4 Simplify $f + f + f - f$.

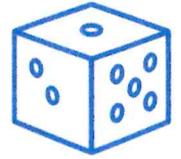
.....2f.....

(Total for Question 4 is 1 mark)

5 Write 2% as a decimal.

.....0.02.....

(Total for Question 5 is 1 mark)



6 (a) Write down the value of 5^2 .

$$5 \times 5 = 25$$

..... 25
(1)

(b) Write down the value of $\sqrt{81}$

..... 9
(1)

(c) Write down the value of 4^3

$$4 \times 4 \times 4$$

..... 64
(1)

(Total for Question 6 is 3 marks)

7 (a) Here is a list of **four** numbers.

5.84 6.12 6.27 6.35

Use **one** number from the list to complete each statement.

The number **closest** in value to 6 is 5.84

The number that **rounds** to 6.3 to 1 decimal place is 6.27

(2)

(b) Here is a list of **six** numbers.

-12 -6 -3 5 -8 12

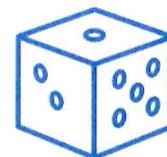
Use **two** numbers from the list to complete each statement.

Two numbers that **add** to make -1 are 5 and -6
 $5 + -6 = -1$

Two numbers that **multiply** to make 24 are -3 and -8
 $-3 \times -8 = 24$

(2)

(Total for Question 7 is 4 marks)



- 8 Bananas cost **30p** each.
Pears cost **45p** each.

Amir has **£12** to spend on bananas and pears.

He buys:

8 bananas and **as many** pears as possible.

How many **pears** does he buy?

$$8 \times 30p = 240p = \text{€}2.40$$

$$1200p - 240p = 960p = \text{€}9.60$$

$$960 \div 45 = 21.33$$

..... 21 Pears

(4)

(Total for Question 8 is 4 marks)

- 9 Leo and Mia go **cycling**.
The **distance** they cycled is shown below,

Days	1	2	3	4	5	6	7	8
Leo	5	7	8	10	12	12	14	18
Mia	6	7	9	10	10	13	15	16

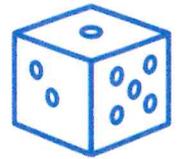
$$\begin{aligned} \text{Leo} - 10 + 12 &= 22 & 22 \div 2 &= 11 \\ \text{Mia} - 10 + 10 &= 20 & 20 \div 2 &= 10 \end{aligned}$$

Complete the table.

	Median	Range
Leo	11	13
Mia	10	10

$$\begin{aligned} \text{Leo} - 18 - 5 &= 13 \\ \text{Mia} - 16 - 6 &= 10 \end{aligned}$$

(Total for Question 9 is 4 marks)



10 (a) Work out 15% of 900.

$$\begin{array}{r} 10\% = 90 + \\ 5\% = 45 + \\ \hline 135 \end{array}$$

135
(2)

(b) Increase 200% by 70%.

$$\begin{array}{l} 100 + 70 = 170 \\ 200 \times 1.70 \end{array}$$

340%
(2)

(Total for Question 10 is 4 marks)

11 A linear sequence has:

1st term = 7

Sum of the 1st and 2nd terms = 19

Work out the 5th term of the sequence.

$$1^{\text{st}} + 2^{\text{nd}} \text{ Term} = 19$$

$$19 - 7 = 12$$

$$12 - 7 = 5.$$

$$1^{\text{st}} - 7$$

$$2^{\text{nd}} - 12$$

$$3^{\text{rd}} - 17$$

$$4^{\text{th}} - 22$$

$$5^{\text{th}} - 27$$

27
(4)

(Total for Question 11 is 4 marks)



- 12 Each day, Lina drinks $\frac{1}{3}$ of a litre of juice in the **morning** and $\frac{1}{2}$ a litre of juice in the **evening**.

How many litres of juice does she drink in **30 days**?

$$\frac{1}{3} + \frac{1}{2} = \frac{2}{6} + \frac{3}{6} = \frac{5}{6} \leftarrow \text{Litre per day}$$

$$30 \times \frac{5}{6} = 5 \times 5 = 25$$

.....
25

(3)

(Total for Question 12 is 3 marks)

- 13 Two friends share **£350** in the ratio 2 : 5.

(a) Work out the **larger** share.

$$2 + 5 = 7$$

$$350 \div 7 = 50$$

$$5 \times 50 = 250$$

.....
250

(2)

(b) A **third** friend joins, and the **£350** is now shared between all **three** friends in the ratio 2 : 5 : 3.

How much **more** does the friend with the **largest** share get than the friend with the **smallest** share?

$$2 + 5 + 3 = 10$$

$$350 \div 10 = 35$$

$$\text{Large} - 5 \times 35 = 175$$

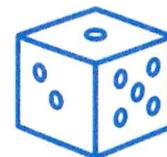
$$\text{Small} - 2 \times 35 = 70$$

$$\text{Difference} - 175 - 70$$

.....
£105

(3)

(Total for Question 13 is 5 marks)



- 14 A triangle has a **base** of 12 cm and a **height** of 7.5 cm.

Work out the **area** of the triangle.

Formula: $\frac{1}{2} \times \text{base} \times \text{height}$

$$\frac{1}{2} \times 12 \times 7.5 = 90$$

$$6 \times 7.5 = 45$$

.....45..... cm^2
(2)

(Total for Question 14 is 2 marks)

- 15 The **attendance** for a concert is **12,300** people to the nearest **100**.

(a) Write down the minimum possible attendance.

.....12,250.....
(1)

(b) Write down the maximum possible attendance.

.....12,349.....
(1)

(Total for Question 15 is 2 marks)

TOTAL FOR PAPER IS 40 MARKS