GCSE Foundation
Full Practice Paper

LUCKY MATHS

More papers

SCAN ME

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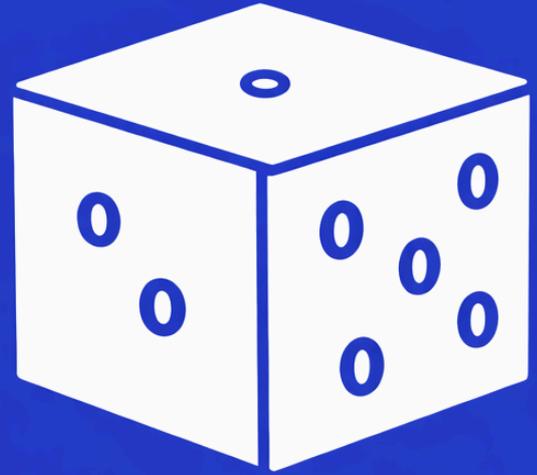
Solutions

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 80

Materials
Black pen
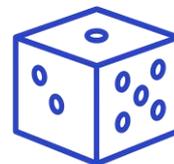Pencil
Ruler
Scientific Calculator

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

You must write down all the stages in your working.

1   Round **23.7** to the nearest whole number.

....

(Total for Question 1 is 1 mark)

2   **Calculate**: $\sqrt{169}$

....

(Total for Question 2 is 1 mark)

3   **Solve**: $x + 5 = 12$

....

(Total for Question 3 is 1 mark)

4   **Convert** 2.5 m into cm.

....

(Total for Question 4 is 1 mark)

5   Find 10% of 90.

....

(Total for Question 5 is 1 mark)
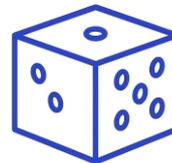
6 Nicola is preparing resources for one of her lessons and requires the use of glue sticks.

She buys **12 packs of glue sticks**.

Each pack contains **8 glue sticks**.

At the end of the lesson, Nicola discovers that **15%** of the glue sticks are dried out and cannot be used.

Work out how many usable glue sticks Nicola has left.

....

(3)

(Total for Question 6 is 3 marks)

7 A recipe for paint mixture uses **blue paint** and **white paint** in the ratio **3 : 5**.
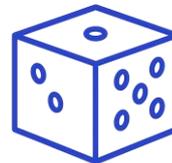
Zara wants to make **4 litres** of the mixture.

Work out how much **blue paint** and how much **white paint** she needs.

....

(2)

(Total for Question 7 is 2 marks)

8 (a) **Solve**: $3x + 5 = 22$

....

(1)

(b) **Solve**: $\dfrac{5x+7}{4} = 11$

....

(2)

(Total for Question 8 is 3 marks)

9 (a) **Expand** the **expression**: $(x + 4)(x - 7)$

....

(2)

(b) **Factorise** the **quadratic expression**: $x^2 - 2x - 15$

....

(2)

(Total for Question 9 is 4 marks)
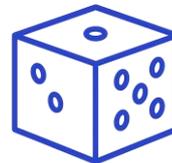
10   Complete the table below:

Decimal	Percentage
0.28	
0.4	
	82%
0.07	

(3)

(Total for Question 10 is 3 marks)

11   Alice earns £19.20 for **every hour** she works between **Monday** and **Friday**.
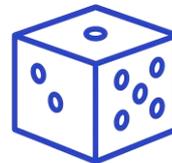
On **Saturdays**, she is paid **£21.40 per hour**.

Last week, Alice worked **18 hours** during **Monday–Friday** and an **additional 6 hours** on **Saturday**.

Calculate Alice's total earnings for the **week**.

....

(3)

(Total for Question 11 is 3 marks)

12 A car travels from Town A to Town B, a distance of **156 km**.

For the first **2 hours**, it travels at an average speed of **60 km/h**.

It then increases its speed and completes the remaining journey in **1 hour**.

Calculate the car's **average speed** for the whole journey.

Show all working.

....
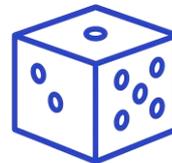
(4)

(Total for Question 12 is 4 marks)

13 A wildlife reserve recorded **240 polar bears** living in the Arctic region last year.

This year, the population increased to **276 polar bears**.

Calculate the **percentage increase** in the number of polar bears.

....

(3)

(Total for Question 13 is 3 marks)

14 A shop sells bags of pasta in **two different sizes**:

- **Bag A:** 750 g for £1.95
- **Bag B:** 1.2 kg for £2.88

Which bag is the **better value** for money?

Show your working.

....

(3)

(Total for Question 14 is 3 marks)

15 A recipe uses **24 g of sugar** and **36 g of flour**.

Simplify the ratio of **sugar** to **flour.**

.

....

(2)

(Total for Question 15 is 2 marks)
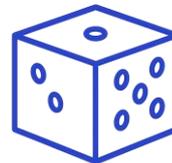
16 Charlie works as a courier.

He earns money for **every mile** he drives.

He also receives an **additional expenses payment**.

One week Charlie writes down the **distance readings** from his van.

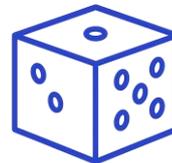| Start of week:	5	3	6	8	2	miles
End of week:	5	4	1	9	7	miles

For this week, Charlie is paid **52p** for **each mile** he drives.

He is also paid **expenses** of **£75**.

Work out the **total amount** that Charlie is paid.

Give your answer in pounds.

....

(4)

(Total for Question 16 is 4 marks)

17 Maya flips a coin **3 times**.

Each flip can result in heads (H) or tails (T).

Write down **all the possible outcomes**.

....

....

....

(2)

(Total for Question 17 is 2 marks)

18 Mr Luck organised a school trip for **72 pupils**.

The total cost of the trip was **£2,160**.
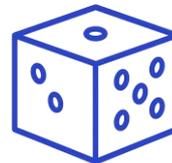
The school paid **40%** of the total cost.

The remaining amount was shared equally between the **72 pupils**.
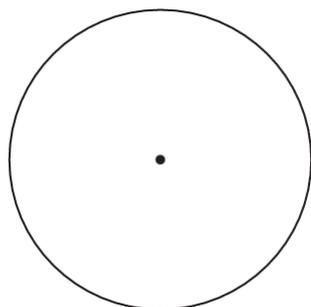
Work out how much each pupil had to pay.

....

(3)

(Total for Question 18 is 3 marks)
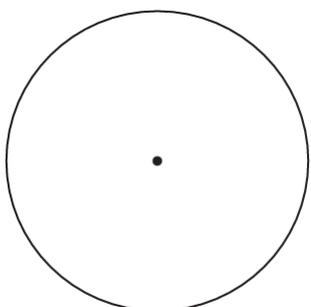
19 Below is a **circle**

(a) Draw a **Diameter** of the circle   **(1)**

(b) Draw a **Tangent** of the circle

(1)

(Total for Question 19 is 2 marks)
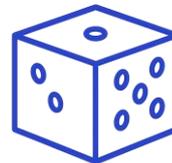
20 Which **is greater**

18% of 75 or **22% of 54**?

You must show all your working.

....

(3)

(Total for Question 20 is 3 marks)

21 In a tournament, a player earns:

- **4 points** for each match they win
- **1 point** for each match they draw
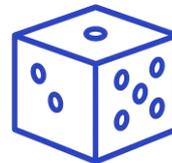- **0 points** for each match they lose
-

Bella wins **a** matches and draws **b** matches.

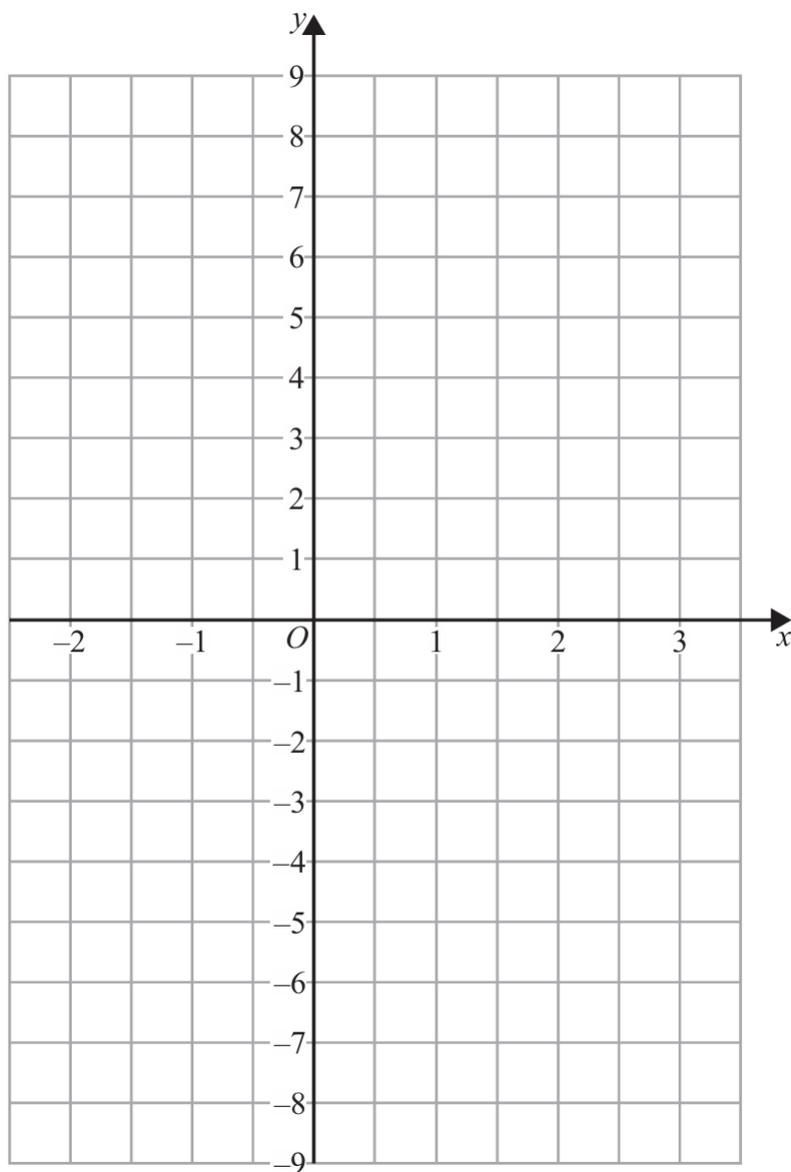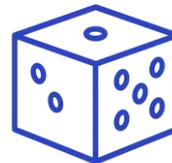Write down an expression, in terms of **a** and **b**, for the total number of points Bella earns.

....

(3)

(Total for Question 21 is 3 marks)

22 On the grid below, draw the graph of **y = 2x + 1** for values of **x** from **–2 to 3**.

(4)

(Total for Question 22 is 4 marks)

23 Courtney has **two identical glass jars**.

She pours **750 grams of sugar** into the first jar.

This amount of sugar **fills the jar to the top**.

The density of the sugar is **1.25 g/cm³**.

Courtney then puts **750 grams of rice** into the second jar.

The rice **does not** fill the jar completely.

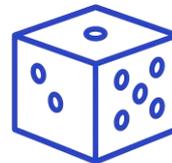There is **300 cm³** of empty space left in the jar.

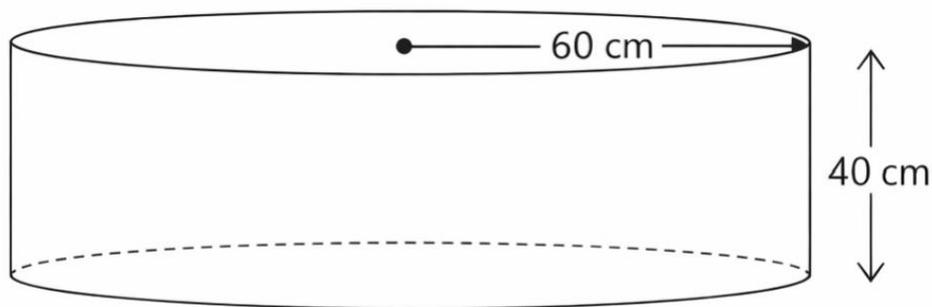**Work out the density of the rice.**

Show all your working.

....

(4)

(Total for Question 23 is 4 marks)

24 A paint can is in the shape of a **cylinder**.

The paint can has **radius 60 cm**.

The paint can has **height 40 cm**.

The paint can is empty.

It is then filled with paint at a rate of **100 cm³ per second**.

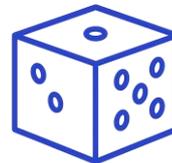Calculate the number of **minutes** it takes to **fill** the can completely.

Give your answer correct to the **nearest minute.**

You must show all your working.

....

(3)

(Total for Question 24 is 3 marks)

25 Sophie asks students in Year 8 and Year 9 to choose their favourite sport from **Football, Basketball, or Tennis.**

The **two-way table** shows information about her results.

The table includes:

- Year 8: 28 students choosing **Football**, 31 choosing **Tennis**
- Year 9: 42 students choosing **Basketball**, total 119 students
- Overall totals: 73 choosing **Tennis**, 212 students altogether

Complete the two-way table.

	Football	Basketball	Tennis	Total
Year 8	28		31	
Year 9		42		119
Total			73	212

(Total for Question 25 is 3 marks)
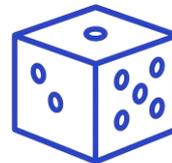
26 A documentary has **10 episodes**.

Each episode lasts **36 minutes**.

Work out the **total time** for all 10 episodes.

Give your answer **in hours**.

....

(2)

(Total for Question 26 is 2 marks)
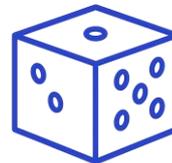
27 Reuben buys a new laptop in **2024**.

The value of the laptop **decreases** by **12% every year**.

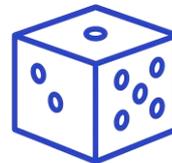Reuben wants to know if the value of the laptop will fall below **£200** by **2030**.

Will the value be below **£200 in 2030?**

You must show how you get your answer.

....

(4)

(Total for Question 27 is 4 marks)

28 A pizza shop sells **small pizzas** for **£6** each and **large pizzas** for **£10** each.

Tiana buys **2 small** pizzas and **1 large pizza.**

(a) Work out the **total cost** of Tiana's order.

....................................….

(1)

(b) Tiana pays with a **£30 note**. How much **change** should she get?

....................................….

(1)

(c) If the price of a large pizza increases by **20%**, what will the **new price** be?

....................................….

(2)

(Total for Question 28 is 4 marks)
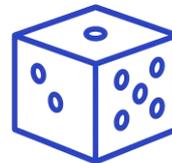
29 A café sells **tea**, **coffee**, and **sandwiches**.

The prices are:

- Tea: **£1.80**
- Coffee: **£2.50**
- Sandwich: **£3.60**

One morning, the café sells:

- **25 teas**
- **18 coffees**
- **12 sandwiches**

(a) Work out the **total money** the café makes from tea and coffee sales.

…………………………………

(1)

(b) Work out how much the café makes from **all three items**.

…………………………………

(1)

(c) If the café wants to earn **£150** that day, how much **more money** does it need to make?

…………………………………

(2)

(Total for Question 29 is 4 marks)

TOTAL FOR PAPER IS 80 MARKS