GCSE Foundation
Full Practice Paper

LUCKY MATHS

More papers

SCAN ME

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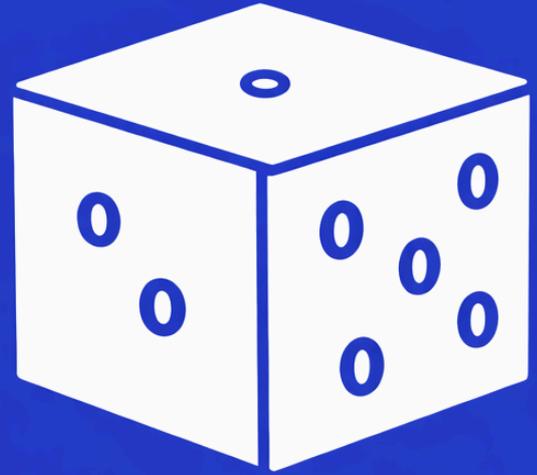
Solutions

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
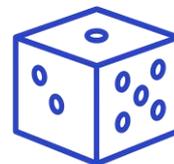
Black pen

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 **78** to the nearest **10**.

....

(Total for Question 1 is 1 mark)

2 Work out: **45 ÷ 5**

....

(Total for Question 2 is 1 mark)

3 Write $\frac{1}{2}$ as a decimal.

....

(Total for Question 3 is 1 mark)

4 How many degrees in a **right angle**?

....
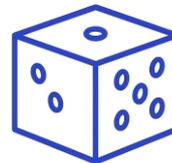
(Total for Question 4 is 1 mark)

5 What is the name of a **triangle** with **two equal sides** and **two equal angles**?

....

(Total for Question 5 is 1 mark)

6   Increase **240** by **15%**.

....
(3)

(Total for Question 6 is 3 marks)

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7   Work out the **value** of **3x + 5** when **x = 12**.
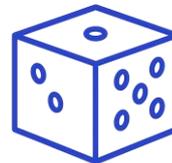
....
(1)

(Total for Question 7 is 1 marks)

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8   Find the **area** of a rectangle with length **14.6 cm** and width **9.3 cm**.

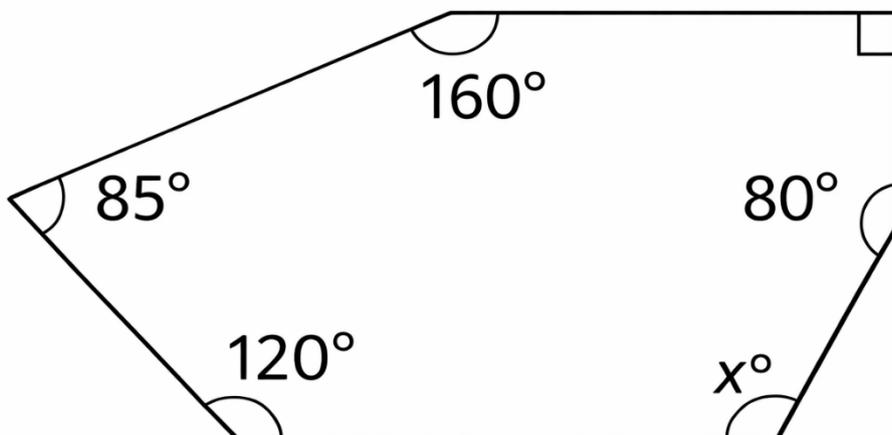.....................................
(2)

(Total for Question 8 is 2 marks)

9 Calculate the size of angle $x°$

Not drawn to scale

....

(2)

(Total for Question 9 is 2 marks)
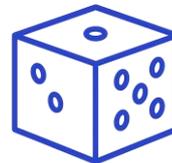
10 Calculate the **area** of the **triangle** below:

5 cm

12 cm
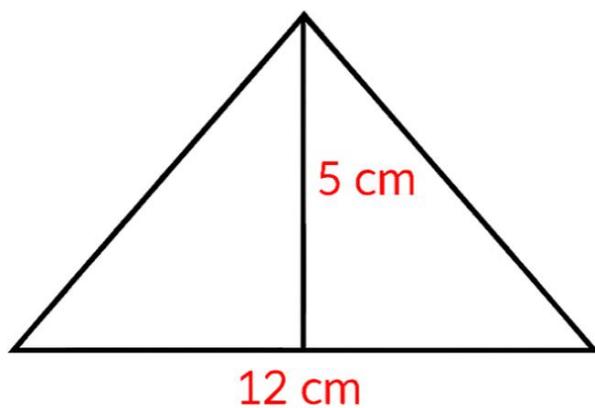
....cm^2

(3)

(Total for Question 10 is 3 marks)

11 The ratio of **cats** to **dogs** at an animal shelter is **4 : 7**.

If there are **28 dogs**,

How many **cats** are there?

....

(2)

(Total for Question 11 is 2 marks)

12 The heights of **80 students** in a school are recorded in the table below.

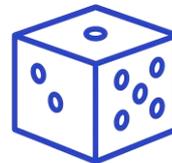| Height, H cm	Frequency	Midpoint	
140 < H ≤ 150	10	145	
150 < H ≤ 160	18	155	
160 < H ≤ 170	26	165	
170 < H ≤ 180	16	175	
180 < H ≤ 190	10	185	

Calculate an estimate for the **mean** of the height of students in the school

....

(4)

(Total for Question 12 is 4 marks)

13   The table below shows the number of chocolates in a box:

Chocolate	Number in Box
Dark	15
Milk	22
White	10
Hazelnut	13

(a) What is the **total number** of chocolates in the box?
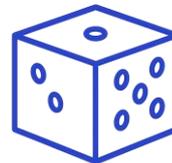
………………………….…………

(1)

(b) Abbie takes a chocolate from the box at random, what is the probability that Abbie takes a **white chocolate**?

……………………………………

(2)

(Total for Question 13 is 3 marks)

14 A factory produces **12** toy cars in **8 minutes**.

(a) Use the unitary method to work out how many toy cars the factory produces in **1 minute**.

………………………………….

(1)

(b) Hence, work out how many toy cars the factory produces in **30 minutes**.

………………………………….

(2)

(Total for Question 14 is 3 marks)

15 A class has **28 boys** and **42 girls**.

(a) Write the ratio of boys to girls.

………………………………….

(1)

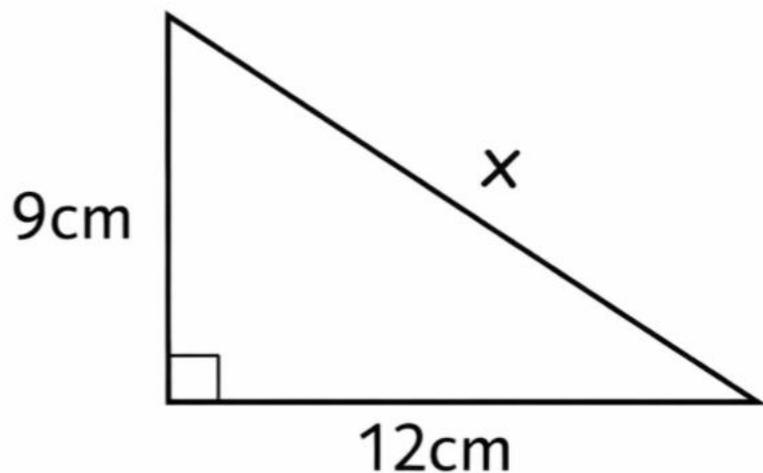(b) Write this ratio in its **simplest form**.

………………………………….

(1)

(Total for Question 15 is 2 marks)
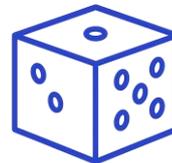
16 Shown below is a **right-angled triangle**.

Use **Pythagoras Theorem** to work out the value of x.

....

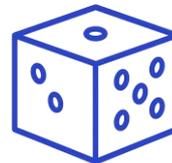**(3)**

(Total for Question 16 is 3 marks)

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17 A map uses a scale of **1 : 25 000**.

(a) On the map, the **distance** between two towns is **6 cm**.

Work out the **real-life distance** in **kilometres**.

...................................km

(1)

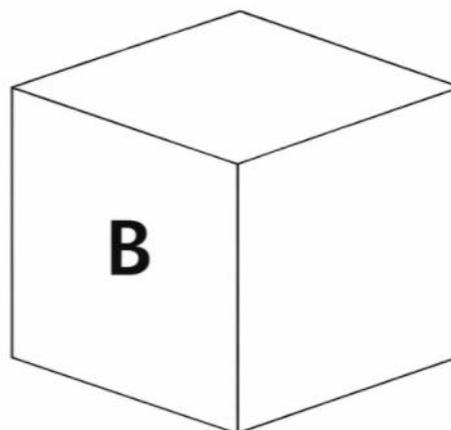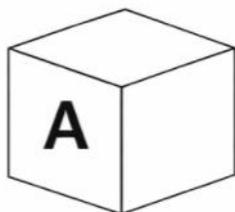(b) A walking trail is **10 km** long in real life.

How long should it be on the map?

………………………………….

(1)

(Total for Question 17 is 2 marks)

18 Below are two **similar cubes**.

The **volume** of cube A is 27 cm^3
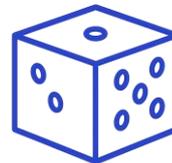
Cube A has a **side length** of 3cm

Cube B has a **side length** of 6cm

Work out the **volume** of **Cube B**

……………………………

(4)

(Total for Question 18 is 4 marks)

19 A laptop originally costs **£690**.

Its price is increased by **12%**.

Work out the **new price** of the laptop.

....

(3)

(Total for Question 19 is 3 marks)

20 Below is a **cylinder** with a **radius** of 4cm and a **height** of 10cm
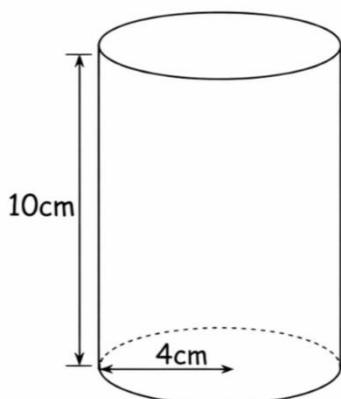
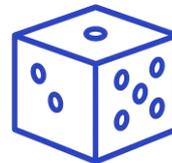Calculate the **volume** of the **cylinder**.

....

(4)

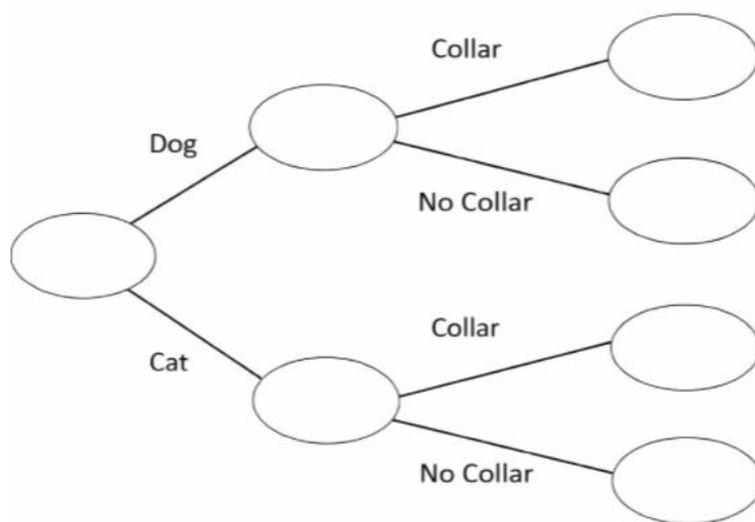**(Total for Question 20 is 4 marks)**

21 **75 people** were surveyed.

They own either a **dog** or a **cat**.

28 of the **40** people who own a dog use a **collar**.

12 people who own a **cat** use a **collar**.

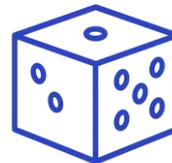(a) Use this information to complete the **frequency tree.**

(3)

(b) Work out the **probability** that this person owns a **dog** and **uses a collar**.

....

(2)

(Total for Question 21 is 5 marks)

22 The cost of Brad's Internet data plan is listed below:

Monthly charge: £19.50

Additional data: £5.50 per 1GB

(a) In **December** Brad's internet plan was **£55.50**.

Work out how many **additional gigabytes** of **data** Brad **used** in **December**.

....

(3)

Total for Question 22 is 3 marks)

23 A cyclist travels at a **constant speed** of **12 km/h**.

He cycles for **45 minutes**.

Work out the **distance** he travels.

....

(3)

(Total for Question 23 is 3 marks)
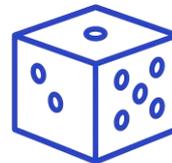
24 Work out the number that is **halfway** between 26 and 84.

.

....

(2)

(Total for Question 24 is 2 marks)

25 Below is a diagram of a **three dimensional** shape.
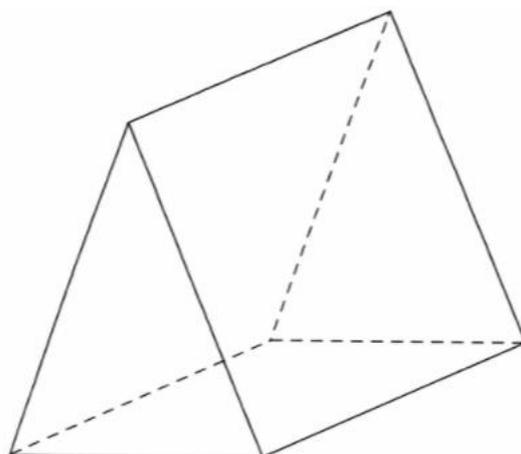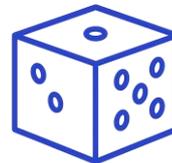

(a) Write the **name** of the shape.

....

(1)

(b) How many **vertices** does this shape have?

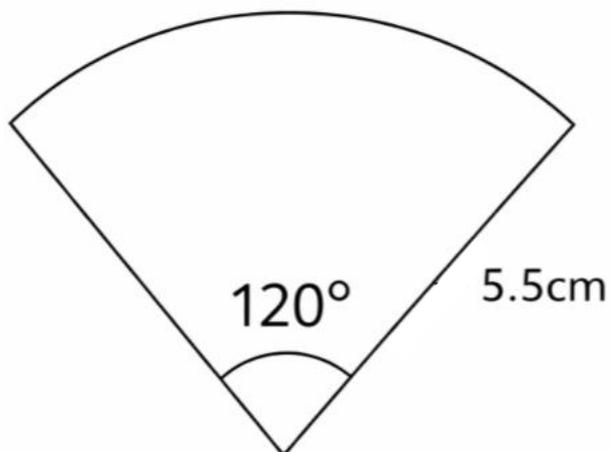...

(2)

(Total for Question 25 is 3 marks)

26 The diagram below shows a sector of a circle with a radius of 5.5cm.

120°   5.5cm

Work out the **area** of the sector.

Give your answer to 2 **decimal places**.

....

(4)

(Total for Question 26 is 4 marks)
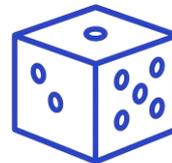
27   Albert thinks of a number.

He divides his number by **5**.

Albert then subtracts **3**.
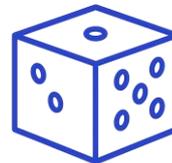
He then multiplies his result by **8**.

His final answer is **88**.

What was the number Albert **first thought of**?

....

(4)

(Total for Question 27 is 4 marks)

28 A chef is preparing a large batch of **guacamole** for a restaurant.

He mixes **avocado, tomato, and onion** in the ratio **4 : 3 : 1**.

(a) The chef wants to make **4.8 kg** of **guacamole**.

Work out how much **tomato** he needs.
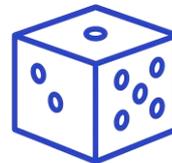
....

(2)

The chef later prepares **another batch**, this time making **12 kg of guacamole** while keeping the **same ratio**.

(b) Work out how much **avocado**, **tomato**, and **onion** he needs for the **12 kg** batch.

....

(3)

(Total for Question 28 is 5 marks)

29 A swimming pool runs fun sessions where each visitor is **randomly given** one of three coloured wristbands:

- **Blue**
- **Green**
- **Red**

The probability that a visitor receives a **Blue** wristband is **0.4**.

The probability that a visitor receives a **Green** wristband is **0.35**.

There are **200** visitors at the fun session.

(a) Work out the probability that a visitor receives a **red** wristband.

....

(1)

(b) Work out how many visitors you would expect to receive a **green** wristband.

....

(2)

Later that day, the manager selects **two visitors** at **random** (with replacement).

(c) Work out the probability that both selected visitors have a **blue** wristband.

....

(2)

(Total for Question 29 is 5 marks)

TOTAL FOR PAPER IS 80 MARKS