GCSE Foundation Full Practice Paper

Paper 2 - Set 3
Calculator

LUCKY MATHS

More papers

SCAN ME

SCAN ME

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 **4832** to the nearest **hundred**.

.....

(Total for Question 1 is 1 mark)

---

2 Write **0.45** as a fraction in its simplest form.

.....

(Total for Question 2 is 1 mark)

---

3 Convert **5.6 metres** into **centimetres**.

.....cm

(Total for Question 3 is 1 mark)

---

4 Simplify: **6 × 3p**

.....

(Total for Question 4 is 1 mark)

---

5 Here is a list of numbers: **15, 30, 55, 75, 90**

One of these numbers is **not** a **multiple** of **15**.

Which number?

.....

(Total for Question 5 is 1 mark)

---

6 On a map, points **A** and **C** are 12 cm apart.

The scale is **1 cm = 5 km**.

Work out the real distance between **A** and **C**.

.....

(3)

(Total for Question 6 is 3 marks)

---

7 A sequence begins: **10, 15, 20, 25, 30**

(a) Write the next term.

.....

(1)

(b) Write the ratio of the **first term to the fifth term**, in simplest form.

.....

(2)

(Total for Question 7 is 3 marks)

---

8 The table shows the **masses** of suitcases at an airport.

Mass (kg)	Number of suitcases
12	3
15	7
18	5
20	2
22	1

Show that the total mass is **less than 500 kg**.

.....

(3)

(Total for Question 8 is 3 marks)

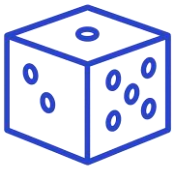
9 A school has **60 teachers**, which is $\frac{1}{20}$ of the total number of staff and students.

Work out the **total number** of people in the school.

.....

(2)

(Total for Question 9 is 2 marks)



10 A storage box is **50 cm × 40 cm × 30 cm**.

Each packet is **20 cm × 10 cm × 10 cm**.

What is the **maximum number of packets** that can fit in the box?

……cm

(4)

(Total for Question 10 is 4 marks)

11 Three shops A, B, and C sell sandwiches.

The mean number sold per day is **240**.

Shop A sells **180**, and shop B sells **260**.

How many does **shop C** sell?

.....

(4)

(Total for Question 11 is 4 marks)

---

12 Work out the value of: $\frac{18.4 \times 3.2}{7.1}$

Write down **all figures** on your calculator display.

.....

(2)

(Total for Question 12 is 2 marks)

---

13 Work out the **reciprocal** of **0.4**

.....

(1)

(Total for Question 13 is 1 mark)

---

14 Write **84** as a product of its prime factors.

.....

(3)

(Total for Question 14 is 3 marks)

---

15 A number **t** is rounded to 1 decimal place and becomes **8.9**.

Complete the **error interval** for **t**:

..... ≤ t < .....

(2)

(Total for Question 15 is 2 marks)

---

16 A triangle has base **(2x + 1) cm** and height **6 cm**.

A rectangle has width **4 cm** and length **(3x – 2) cm**.

The triangle's area is **8 cm² more** than the rectangle's area.

Find **x**.

.....

(4)

(Total for Question 16 is 4 marks)

---

17 A family recycled **900 kg** of waste last year.

40% was **paper or metal**.

The ratio paper : metal = **9 : 5**.

Work out the mass of **metal** recycled.

.....

(3)

(Total for Question 17 is 3 marks)

---

18 Melissa buys a laptop for **£600**. It increases in value by **3% each year**.

Sophie buys a laptop for **£650**. It increases by **1% each year**.

After **2 years**, whose laptop is worth more?

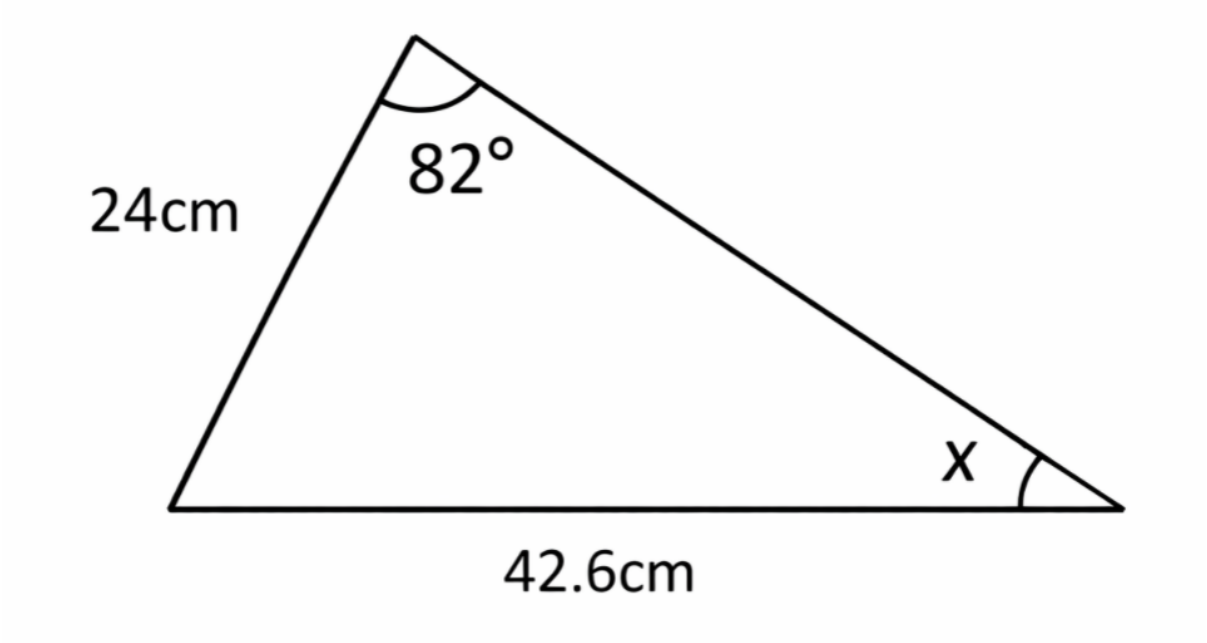
Show your working.

.....

(4)

(Total for Question 18 is 4 marks)

19 Calculate the size of the **angle** marked **x**.



.....

(3)

(Total for Question 19 is 3 marks)

20 The translation vector that moves **shape P** to **shape Q** is: $\begin{pmatrix} 5 \\ -2 \end{pmatrix}$

Write down the translation vector that maps **shape Q** back to **shape P**.

.....

(2)

(Total for Question 20 is 2 marks)

---

21 **Lucy runs 1.6 kilometres in 3 minutes.**

Calculate her average speed.

Give your answer in **m/s**.

.....

(2)

(Total for Question 21 is 2 marks)

---

22 Babu's students are using the school's **unreliable** maths software to revise.

They enter the following **equation** into the software: $4y - 9 = 27$

The software freezes again, so the students decide to **solve** it themselves.

Calculate the **value** of y.

You must show all your working.

.....

(2)

Total for Question 22 is 2 marks)

---

23 A shop sells bars of soap in packs of **6**.

Each bar of soap has a mass of **85 g**.

Mia buys **4 packs** of soap.

What is the total number of soap bars Mia buys?

.....

(3)

(Total for Question 23 is 3 marks)

---

24 The first five **terms** of a number sequence are:

7, 12, 17, 22, 27

(a) Find the **nth term** of the sequence.

.

.....

(2)

(b) Use your answer to part (a) to find the **20th term** of the sequence.

.....

(1)

(Total for Question 24 is 3 marks)

---

25 A shop sells:

- A packet of **biscuits** for **£1.89**
- A carton of **juice** for **£2.37**
- A **sandwich** for **£3.28**
-

A customer buys **3 packets of biscuits**, **2 cartons of juice**, and **1 sandwich.**

Estimate the total cost.

Show your working clearly.

.....

(3)

(Total for Question 25 is 3 marks)

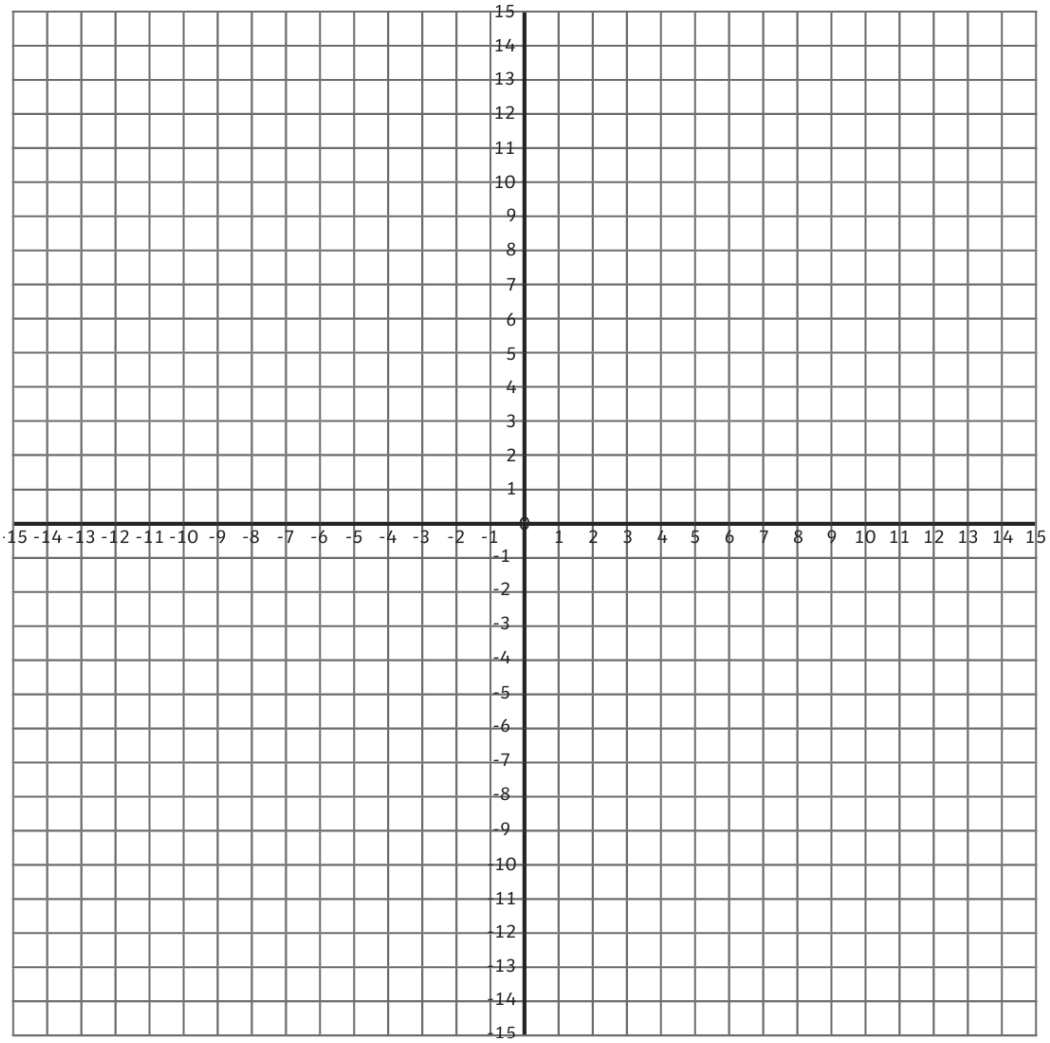
---

26 (a) Complete the table of values for $y = 3x + 4$

x	−1	0	1	2	3
y		4			13

(2)

(b) Using the axes provided, **plot the graph of** y = 3x + 4 **for all x-values between −1 and 3.**



(3)

(Total for Question 26 is 5 marks)

27 Solve the **simultaneous equations:**

$$\mathbf{4 - 3y = 10}$$
$$\mathbf{4x - y = 14}$$

Show all of your working out.

.....

(4)

(Total for Question 27 is 4 marks)

28 A train travels from **Boston** to **Northampton**.

The distance between the two towns is **88 miles**.

(a) The train travels from Boston to Northampton at an average speed of **40 mph**.
Calculate how long the journey takes.

.....

(2)

(b) On the **return** journey, the train travels at a **different** speed**: Speed** $= x$ **mph**

The return journey takes **1 hour less** than the journey in part (a).

Write an **equation in terms of** x and **solve** it to find the return speed.

.....

(3)

(Total for Question 28 is 5 marks)

29 Two maths teachers, **Mr James** and **Mr Luck**, are preparing **different** shapes for a classroom display.

(a) Mr James designs a **rectangle** with a length of **12 cm** and a width of **7 cm**.

He then increases **both** dimensions by **3 cm**.

Work out the **new perimeter** of the rectangle.

.....

(2)

(b) Mr Luck designs a **triangle** with a base of **10 cm** and a height of **8 cm**.

He then **doubles the height** while keeping the base the same.

Calculate the **area** of the new triangle.

.....

(3)

(Total for Question 29 is 5 marks)

TOTAL FOR PAPER IS 80 MARKS