GCSE Foundation
Worked Solutions Paper 1c

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.
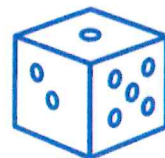The total mark for this paper is 40

Materials
Black pen
Pencil
Ruler

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Simplify $4 \times a \times 5 \times b$

$4 \times 5 = 20$

$a \times b = ab$

.... $20ab$ ....

(Total for Question 1 is 1 mark)

2 Change 2.5 litres into millilitres

$1L = 1000ml$

$2.5 \times 1000 = 2500$

.... $2500ml$ ....

(Total for Question 2 is 1 mark)

3 Write down a prime number between 15 and 20

.... 17 or 19 ....

(Total for Question 3 is 1 mark)

4 Write 0.7 as a fraction

.... $\frac{7}{10}$ ....

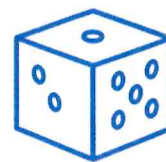**(Total for Question 4 is 1 mark)**

5 Write the following numbers in order of size.
Start with the smallest number. 5 −7 −9 3 0 −2

.... $-9, -7, -2, 0, 3, 5$ ....

(Total for Question 5 is 1 mark)

6   Reuben buys:
 - 1 bottle of juice for **£1.50.**
 - **3 packets of crisps** for **90p each.**
 - 2 chocolate bars for **£2.10 each.**

Reuben pays with a **£10 note**.
He says,   "I should get **£1.40 change**."
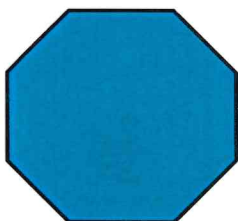**Is Reuben correct?**
You must show how you get your answer.

£1.50 + £2.70 + £4.20 = £8.40

£10.00 − £8.40 = £1.60
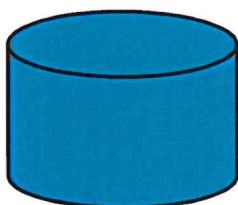
No, £1.60 change

(Total for Question 6 is 3 marks)
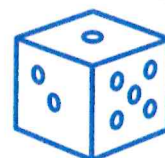
7   Name the shapes:

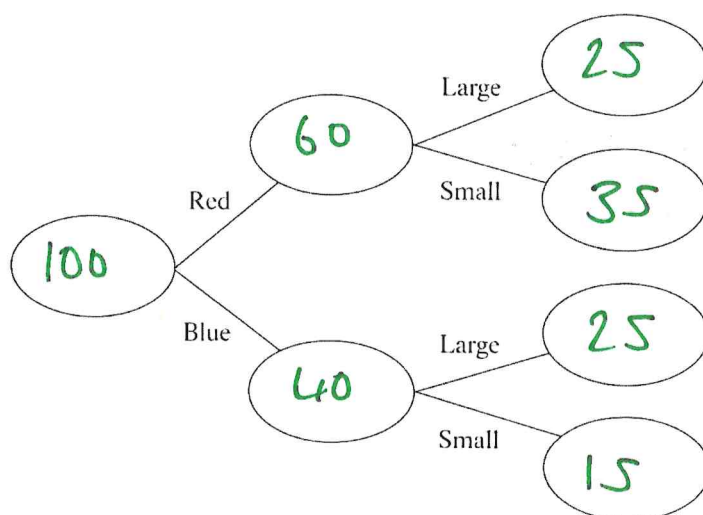Octagon

(1)

Cylinder

(1)

(Total for Question 7 is 2 marks)

8   A bag contains 100 marbles.
     There are **60 red** marbles.
     There are **15 small blue** marbles.
     There are **50 large** marbles in **total**.

(a) Complete the frequency tree.
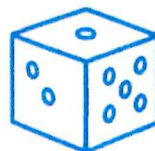
(1)

(b) What fraction of the total marbles are blue?
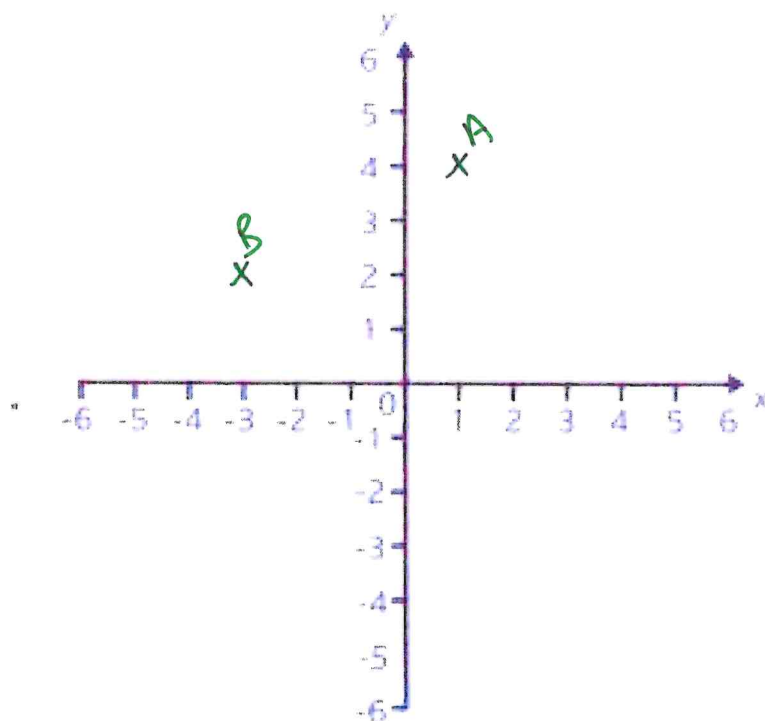
$$\frac{40}{100} = \frac{2}{5}$$

$\frac{2}{5}$
....

(3)

(Total for Question 8 is 4 marks)

9 The coordinates of point **A** are **(1, 4)** and the coordinates of point **B** are **(-3, 2)**.

(a) Plot point A on the grid.

(1)

(b) Plot point B on the grid.

(1)

(c) Write down the coordinates of the midpoint of **AB**.
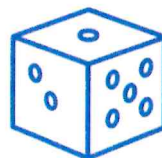
$$\frac{1 + -3}{2} = \frac{-2}{2} = -1$$

$$\frac{4+2}{2} = \frac{6}{2} = 3$$

(-1, 3)

(2)

(Total for Question 9 is 4 marks)

10 The ratio of the number of blue counters to the number of green counters is 13: 7.

(a) What fraction are blue counters?

$13 + 7 = 20$

$$\frac{13}{20}$$

(1)

(b) What percentage are green counters?

$35\dot{}\%$

(2)

(Total for Question 10 is 3 marks)

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11 A group of **8 students** recorded how many minutes they spent revising for a maths test in one week.

The times in minutes were: **35, 42, 28, 40, 50, 32, 38, 45**

(a) Find the **median** time.

$28, 32, 35, 38, 40, 42, 45, 50$
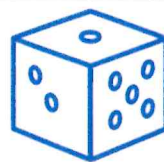
$38 + 40 = 78$

$78 \div 2 = 39$

39

(2)

(b) Find the **range** of the times.

$50 - 28 = 22.$

22

(2)

(Total for Question 11 is 4 marks)

12   A **school** has a total of **120 students**.

The number of boys : girls is 3 : 1.

Each student takes one of three activities: **football, swimming, or drama**.

- $\frac{1}{6}$ **of the boys** take **football**.
- **20% of the boys** take **swimming**.
- The rest of the boys take **drama**.

Work out how many boys take drama.
You must show all your working.

$3 + 1 = 4$

$B = 3 \times 30 = 90$
$G = 1 \times 30 = 30$

$\frac{120}{4} = 30$ Students

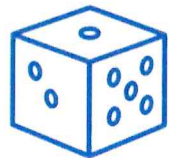Football $= \frac{1}{6}$ of $90 = 15$

$90 \div 6 = 15$
$15 \times 1 = 15$

Swimming $= 20\%$ of 90

$0.20 \times 90 = 18$

Drama $= 90 - 15 - 18 = 57$

.... 57 Boys ....

(Total for Question 12 is 5 marks)

13 Dave travels by train from one town to another at an average speed of **48 miles per hour**.

He travels for **2.5 hours**.

(a) Work out the distance Dave travels.

$D = S \times t$

$48 \times 2.5 = 120$ miles

.... 120 ....

(2)

(b) The train then returns back at an average speed of **60 miles per hour**.

How long does the return journey take?

$T = \dfrac{d}{s}$

$\dfrac{120}{60} = 2$ hours

.... 2 hours. ....

(2)

(Total for Question 13 is 4 marks)

14 Work out 387.2 ÷ 1.6.

$$1.6\overline{)387.2}^{\,242}$$

$$16\overline{)3872}^{\,242}$$

.... 242 ....

(Total for Question 14 is 3 marks)

15 A shop **buys** a tablet for **£180.**
The shop **sells** the tablet for **£135.**
Work out the percentage **loss**.

£180 - £135 = £45

$\frac{45}{180} \times 100 = 0.25 \times 100 = 25\%$

............................**25**............................%

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 40 MARKS