

GCSE Foundation

Worked Solutions Paper 1a

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

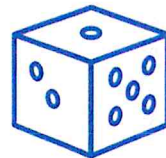
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Answer ALL questions.
Write your answers in the spaces provided.

You must write down all the stages in your working.

- 1 Simplify $a + a + a$

.....*3a*.....

(Total for Question 1 is 1 mark)

- 2 Write 0.6 as a percentage

.....*60*.....%

(Total for Question 2 is 1 mark)

- 3 Change 300cm to metres

.....*3*.....m

(Total for Question 3 is 1 mark)

- 4 Write down a factor of 10

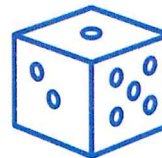
.....*1, 2, 5 or 10*.....

(Total for Question 4 is 1 mark)

- 5 Angle T is 115° . What type of angle is angle T?

.....*obtuse*.....

(Total for Question 5 is 1 mark)



6 Antonio buys the following items:

2 sandwiches costing **£2.85 each**.

A drink costing **£1.40**

A packet of crisps costing **75p**

Antonio pays with a **£10 note**.

Work out how much change Antonio should receive.

You must show your working.

$$£2.85 \times 2 = £5.70$$

$$£5.70 + £1.40 = £7.10$$

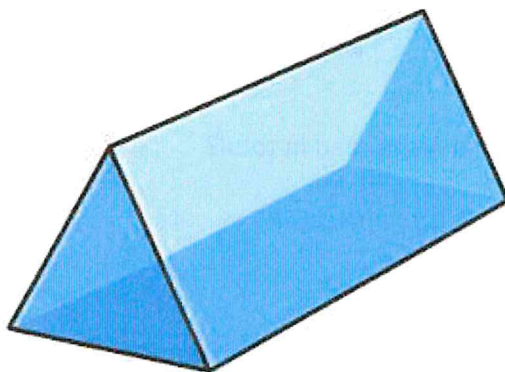
$$£7.10 + 0.75 = £7.85$$

$$\begin{array}{r} £10.00 \\ - £7.85 \\ \hline £2.15 \end{array}$$

£ 2.15

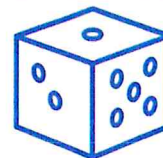
(Total for Question 6 is 3 marks)

7 (a) How many vertices does the following shape have?



.....
6

(1)



(b) Draw a Hexagon in the space below



(1)

(Total for Question 7 is 2 marks)

8 The table below show the number of books and magazines read over a year by four students

Student	Books	Magazines
Aisha	42	18
Ben	67	25
Chloe	51	12
Dylan	29	20

(a) How many books and magazines did Aisha read in total?

$$\begin{array}{r} 42 \\ 18 \\ \hline 60 \end{array}$$

.....60.....

(1)

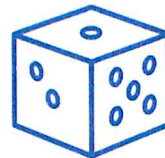
(b) How many more books were read over the year than magazines?

$$\begin{aligned} \text{Books} &= 42 + 67 + 51 + 29 = 189 \\ \text{Magazines} &= 18 + 25 + 12 + 20 = 75 \\ \text{Difference} &= 189 - 75 = 114 \end{aligned}$$

.....114.....

(3)

(Total for Question 8 is 4 marks)



- 9 (a) Expand $2(3b+5)$

$$\underline{6b+10}$$

(1)

- (b) Factorise $12y+20$

$$\underline{4(3y+5)}$$

(1)

- (c) Solve $2c+5=19$

$$\begin{array}{r} -5 \quad -5 \\ \div 2 \quad (2c = 14) \quad \div 2 \\ \quad \quad c = 7 \end{array}$$

$$\underline{7}$$

(2)

(Total for Question 9 is 4 marks)

- 10 (a) Write 14738 to the nearest 1000

$$\underline{15,000}$$

(1)

- (b) Work out an estimate for the value of 3.85×97.5

$$3.85 = 4$$

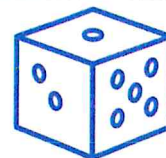
$$97.5 = 100$$

$$4 \times 100 = 400$$

$$\underline{400}$$

(2)

(Total for Question 10 is 3 marks)



- 11 (a) Work out $\frac{3}{4} - \frac{1}{6}$

$$\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$$

$$\frac{7}{12}$$

(2)

- (b) Work out $\frac{3}{5}$ of 80.

$$80 \div 5 = 16$$

$$16 \times 3 = 48$$

$$48$$

(2)

(Total for Question 11 is 4 marks)

- 12 Here is part of a train timetable

City	A	B	C	D	E
London	—	10:05	12:20	14:10	16:35
Birmingham	09:12	11:22	13:05	15:18	17:30
Manchester	10:48	12:55	14:35	16:50	18:25
Leeds	11:27	13:40	15:10	17:03	19:18
Newcastle	12:15	14:05	16:20	18:07	20:30

- (a) How long does train A take to get from Birmingham to Manchester

$$09:12 - 10:12 = 1 \text{ hour}$$

$$10:12 - 10:48 = 36 \text{ mins} +$$

$$1 \text{ hr } 36 \text{ mins}$$

(2)

- (b) Which train takes the least time to get from London to Newcastle?

You must show how you got your answer?

$$\text{Train A} - B = 09:12 \quad M = 10:48$$

$$09:12 - 10:12 = 1 \text{ hour}$$

$$10:12 - 10:48 = 36 \text{ mins} \quad] \quad 1 \text{ hr } 36 \text{ mins}$$

$$\text{train E}$$

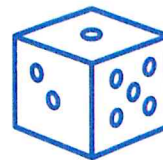
(3)

$$B - 10:05 - 14:05 \quad (4 \text{ h}) \quad E - 16:35 - 20:30$$

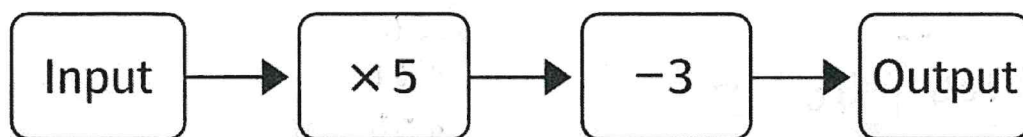
$$C - 12:20 - 16:20 \quad (4 \text{ h}) \quad (3 \text{ h } 55 \text{ min})$$

$$D - 14:10 - 18:07 \quad (3 \text{ h } 57 \text{ min})$$

(Total for Question 12 is 5 marks)



13 Below is a number machine



(a) Find the output when the input is 9.

$$9 \times 5 = 45$$
$$45 - 3 = 42$$

.....42.....
(2)

(b) Find the input when the output is -8.

$$-8 + 3 = -5$$
$$-5 \div 5 = -1$$

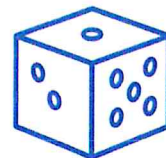
.....-1.....
(2)

(Total for Question 13 is 4 marks)

14 Elena is using a map. The map has a scale of 1 : 15000.
On the map a road has a length of 16cm.
Work out the length, in kilometres, of the real road.

$$16 \times 15,000 = 240,000$$
$$240,000 \div 100,000 = 2.4$$

.....2.4.....km
(Total for Question 14 is 3 marks)



15 Work out 26×1.45

	100	40	5
20	2000	800	100
6	600	240	30

$$\begin{array}{r} 2000 \\ 800 \\ 600 \\ 240 \\ 100 \\ 30 \\ \hline 3770 \\ \hline \end{array}$$

37.7

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 40 MARKS