GCSE Foundation
Worked Solutions Paper 1b

LUCKY MATHS

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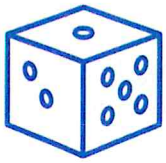
Solutions

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 Write $\frac{1}{5}$ as a percentage

20%.

(Total for Question 1 is 1 mark)

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2 Write down the value of 2^3

2 x 2 x 2

8

(Total for Question 2 is 1 mark)

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3 79% of the counters in a bag are blue.

What percentage of counters in the bag are not blue?

100 - 79 = 21

21%

(Total for Question 3 is 1 mark)

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4 Simplify 2 x 5t

10t

(Total for Question 4 is 1 mark)

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5 Write down the value of the number 6 in the number 2680

600

(Total for Question 5 is 1 mark)

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6 Bev buys some drink bottles.
Each drinks bottle costs £3.50.
Bev pays with a £20 note.
She receives £2.50 change.
Work out the number of drinks bottles Bev buys.

£20 - £2.50 = £17.50
£17.50 - £3.50 = 5 Bottles

5 bottles

(Total for Question 6 is 3 marks)

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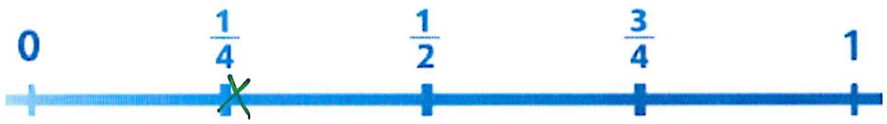
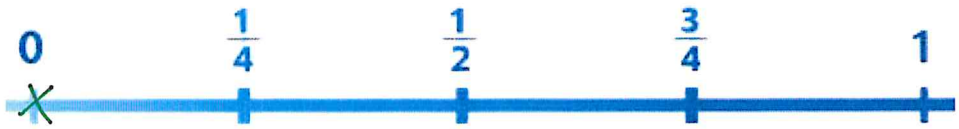
7 (a) Tom chooses at random a letter from the word FUNCTION.
On the probability scale below, mark with a cross (x) the probability that Tom chooses the letter N.



(1)

(b) On the probability scale below, mark with a cross (x) the probability that Tom chooses the letter Z.



(1)

(Total for Question 7 is 2 marks)

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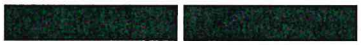
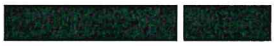
8 The pictogram below shows the number of computers sold in a shop on different days of the week.

 = 8 computers

Day	Computers sold
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

(a) Which day had the **greatest number of computers sold**?

Friday

(1)

(b) How many computers were sold **altogether** from Monday to Friday?

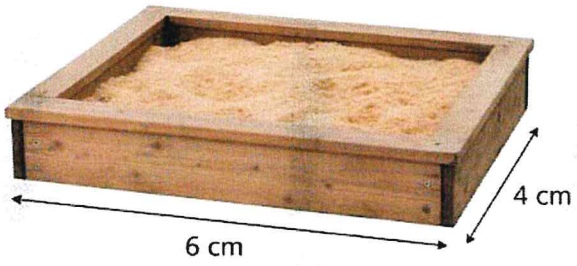
8 + 8 + 8 + 4 + 8 + 8 + 4 + 8 + 8 + 8 + 8 = 80

80

(3)

(Total for Question 8 is 4 marks)

9 The diagram below shows a **rectangular sandpit** drawn to scale. **1cm represents 5m**



(a) Work out the **real length** of the sandpit.

6 x 5 = 30

30m

(1)

(b) Work out the **real width** of the sandpit.

4 x 5 = 20

20m

(1)

(c) Work out the **real perimeter** of the sandpit.

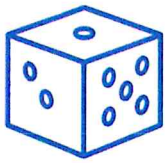
P = 2(L+W)

2 x 50 = 100

100m

(2)

(Total for Question 9 is 4 marks)



10 Here are the first 5 terms of a number sequence,
4 , 10 , 16 , 22 , 28

(a) Work out the 8th term in the number sequence?

$6 \times 8 = 48$
$48 - 2 = 46$

46

(1)

(b) Write down an expression, in terms of *n*, for the *n*th term of the number sequence.

(-2) , 4, 10, 16, 22, 28
-6 +6

6n - 2

(2)
(Total for Question 10 is 3 marks)

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11 t=2s-6

(a) Work out the value of t when s = 10.

$2 \times 10 = 20$
$20 - 6 = 14$

14

(2)

(b) Simplify 4f + 2e - 5f + e

$4f - 5f = -f$
$2e + e = 3e$

3e - f

(2)
(Total for Question 11 is 4 marks)

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12 Ingredients for 12 cupcakes:

Sugar: 180 g
Flour: 240 g
Butter: 120 g

(a) A baker wants to make **18 cupcakes**.

How much **flour** will be needed?

$18 \div 12 = 1.5$

$240 \times 1.5 = 360g$

360g

(2)

(b) The baker has **500 g of butter**.

What is the **maximum number of cupcakes** they can make?

$\frac{120}{12} = 10g$ per cupcake

500g butter

$\frac{500}{10} = 50$

50 cupcakes

(3)

(Total for Question 12 is 5 marks)

13 (a) 124 x 65

	100	20	4
60	6000	1200	240
5	500	100	20

6000
1200
500
100
240
20
8060

8060

(2)

(b) 675 ÷ 15

$$15\overline{)675} = 45$$

45

(2)

(Total for Question 13 is 4 marks)

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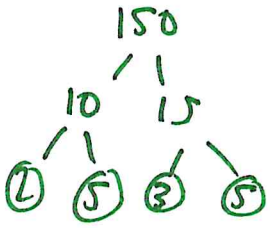
14 (a) Write 150 as a product of its prime factors.



2 x 3 x 5 x 5

(2)

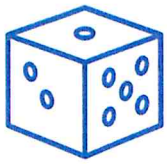
(b) Find the lowest common multiple (LCM) of 20 and 45.

20, 40, 60, 80, 100, 120, 140, 160, (180), 200
45, 90, 135, (180)

180

(2)

(Total for Question 14 is 4 marks)



15 A bakery sells flour and sugar.

3 kg of flour costs £6.75.
4 kg of flour and 2 kg of sugar cost £14.30.
Work out the **cost of 1 kg of sugar**.
Give your answer in **pounds (£)**.

3kg of flour = $\frac{6.75}{3} = 2.25$

1kg = 2.25

4 x 2.25 = £9.00 ∴ 4kg = £9.00

4kg + 2kg = £14.30

2kg - sugar = £14.30 - £9.00 = £5.30

1kg = $\frac{5.30}{2}$ = £2.65

£ 2.65

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 40 MARKS