Half paper C10

Paper 3 style · Calculator · Foundation

36 marks
about 35–40 minutes

Name	Date	Score / 36

Answer ALL questions. Write your answers in the spaces provided. You must write down all the stages in your working. You may use a calculator. Diagrams are **NOT** accurately drawn unless it says so.

Help on the longer questions

Underlined words tell you what the question wants.

Remember reminds you of a fact you need.

1 **Write** 14 952 to the nearest hundred.

.....

(1)

(Total for Question 1 is 1 mark)

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2 **Change** 0.35 kilometres to metres.

..... metres

(1)

(Total for Question 2 is 1 mark)

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3 **Write** 8% as a fraction.

.....

(1)

(Total for Question 3 is 1 mark)

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4 Ben has 500 stickers in a bag.

He gives

60 of the stickers to Amy

90 of the stickers to Cal

50 of the stickers to Dev

What fraction of the 500 stickers is left in Ben's bag?

Give your fraction **in its simplest form**.

> **Remember** Add/subtract: make the denominators the same. Multiply: top × top, bottom × bottom. Divide: flip the second fraction and multiply. Change mixed numbers to top-heavy first.

.....

(3)

(Total for Question 4 is 3 marks)

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5 The table shows the costs of sending a parcel by the Standard service and by the Next day service.

Type of service	Cost
Standard	£14.75
Next day	£32.48

Jo has to send 15 parcels.

It will be cheaper to send the parcels by the Standard service than by the Next day service.

> **Remember** Round every number to 1 significant figure first, then work it out. Say if you rounded up or down.

(a) How much cheaper?

£ .....

(3)

(b) Kai wants to send 19 parcels by the Standard service.

He does the calculation $20 \times £15 = £300$ to estimate the cost.

Explain why Kai's calculation shows the actual cost will be less than £300

(1)

(Total for Question 5 is 4 marks)

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6 Amy, Ben and Cal share an amount of money in the ratio 4 : 5 : 11
What fraction of the money does Ben get?

.....

(2)

(Total for Question 6 is 2 marks)

7 The first term of a sequence of numbers is 14
The term-to-term rule of this sequence is 'add 6'
Leo says,

"No number in this sequence is in the 4 times table."

(a) Give an example to show that Leo is wrong.

.....

(1)

(b) Is 74 a number in this sequence?
Give a reason for your answer.

(1)

(Total for Question 7 is 2 marks)

8 **Find** the value of $\frac{6.38 + 2.7}{8.3 - 4.52}$
Give your answer as a decimal.
Write down all the figures on your calculator display.

.....

(2)

(Total for Question 8 is 2 marks)

9 You can use this rule to work out the total hire charge, in pounds (£), for hiring a boat for a number of days.

Total hire charge (£) = number of days × 85 + 40

Remember Put the numbers in place of the letters, using brackets for negatives. Then follow BIDMAS.

(a) Leo wants to hire a boat for 6 days.
Work out the total hire charge.

£ .....

(2)

(b) Ana hires a boat.
The total hire charge is £720
For how many days does Ana hire the boat?

..... days

(2)

(Total for Question 9 is 4 marks)

10 Here is a rectangle.



The 6-sided shape on the right is made from two of these rectangles.
Work out the perimeter of this 6-sided shape.

Remember Perimeter: add all the sides. Rectangle area = length × width. Triangle area = ½ × base × height.

..... cm

(3)

(Total for Question 10 is 3 marks)

11 The table shows information about the numbers of points scored by 30 students in a quiz.

Number of points	Frequency
0	3
1	5
2	6
3	9
4	4
5	3

Remember Mean from a table = total of (value × frequency) ÷ total frequency. For groups, use the midpoint of each group.

(a) **Find** the modal number of points.

.....

(1)

(b) **Work out** the total number of points scored.

.....

(2)

(Total for Question 11 is 3 marks)

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12 **Make *x* the subject** of the formula $y = 3x - 5$

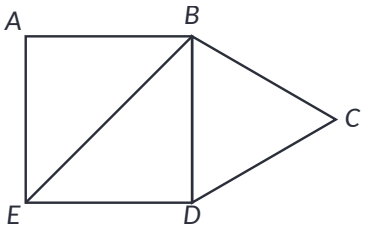
.....

(2)

(Total for Question 12 is 2 marks)

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13 The diagram shows a square *ABDE* and an equilateral triangle *BCD*.



Work out the size of angle *EBC*.

..... °

(2)

(Total for Question 13 is 2 marks)

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14 Tom goes on holiday to Mexico.
Tom wants to change £600 into Mexican pesos.
He wants to get as many 500 peso notes as possible.
The exchange rate is £1 = 23.4 pesos.
Work out the greatest number of 500 peso notes that Tom can get for £600

> **Remember** £ to another currency: multiply by the rate. Another currency to £: divide by the rate.

.....

(3)

(Total for Question 14 is 3 marks)

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15 Kate invests £150 000 in a savings account for 3 years.
The account pays compound interest at a rate of 2.5% per annum.
Calculate the total amount of interest Kate will get at the end of 3 years.

> **Remember** Use a multiplier: amount × (1 + rate)^n, e.g. 3% for 4 years → × 1.03^4. Interest = final amount − original.

£ .....

(3)

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 36 MARKS

C10 mark scheme

Q		Answer	Mark	Notes
1		15 000	B1	
2		350	B1	
3		$\frac{8}{100}$ or $\frac{2}{25}$	B1	
4		$\frac{3}{5}$	M1 M1 A1	M1 for 500 − 60 − 90 − 50 (= 300) M1 for $\frac{300}{500}$ A1 cao
5	(a)	265.95	M1 M1 A1	M1 for 15 × 14.75 (= 221.25) or 15 × 32.48 (= 487.20) M1 for the difference A1 cao
	(b)	He rounded both numbers up (19 to 20 and £14.75 to £15)	C1	C1
6		$\frac{1}{4}$	M1 A1	M1 for $\frac{5}{20}$ A1 oe
7	(a)	e.g. 20 (or 32, 44, ...)	B1	
	(b)	Yes: 74 − 14 = 60, and 60 is a multiple of 6	C1	C1
8		2.4021164021	M1 A1	M1 for 9.08 or 3.78 A1 for 2.40211...
9	(a)	550	M1 A1	M1 for 6 × 85 + 40 A1 cao
	(b)	8	M1 A1	M1 for (720 − 40) ÷ 85 A1 cao
10		38	M1 M1 A1	M1 for identifying the sides of the shape M1 for adding all 6 sides A1 cao
11	(a)	3	B1	
	(b)	75	M1 A1	M1 for at least 3 products A1 cao

Mark scheme continues ►

Q	Answer	Mark	Notes
12	$x = \frac{y + 5}{3}$	M1 A1	M1 for $y + 5 = 3x$ A1 oe
13	105	M1 A1	M1 for 45 (diagonal of a square) or 60 (equilateral triangle) A1 cao
14	28	M1 M1 A1	M1 for 600 × 23.4 (= 14 040) M1 for 14 040 ÷ 500 (= 28.08) A1 for 28
15	11 533.59	M1 M1 A1	M1 for 150 000 × 1.025^3 (= 161 533.59) M1 for − 150 000 A1 for 11 533.59

B1 = mark for a correct answer · **M1** = method mark · **A1** = accurate answer after M1 · **C1** = reason · **cao** = correct answer only

Score ____ / 36