Half paper C13

Paper 2 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** 0.43 as a fraction.

.....

(1)

(Total for Question 1 is 1 mark)

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2 **Write** 82 719 **correct to the nearest 1000**

.....

(1)

(Total for Question 2 is 1 mark)

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3 **Write** $\frac{2}{5}$ as a percentage.

..... %

(1)

(Total for Question 3 is 1 mark)

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4 Maria is watching a film at the cinema.
The film started at 14 15
The film is 115 minutes long.
When the film ends, Maria takes 25 minutes to walk to the train station.
A train leaves the station at 16 30
Does Maria get to the station in time to get this train?
You must show all your working.

Remember 60 minutes = 1 hour. Count on in steps to the next hour. Read across the row for one bus or train.

(3)

(Total for Question 4 is 3 marks)

Turn over ►

5 Here is a cuboid.

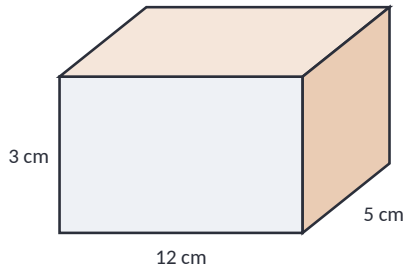


Diagram NOT accurately drawn

Work out the volume of the cuboid.

> **Remember** Volume of a cuboid = length × width × height. Make all the units the same first (1 m = 100 cm).

..... cm^3

(3)

(Total for Question 5 is 3 marks)

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6 A machine fills boxes with pens.
There are 5139 pens.
There are 24 pens in each full box.
The machine fills as many boxes as possible.
How many pens are left?

> **Remember** Divide, then round down for full boxes. Left over = total − (full boxes × number in each box).

.....

(3)

(Total for Question 6 is 3 marks)

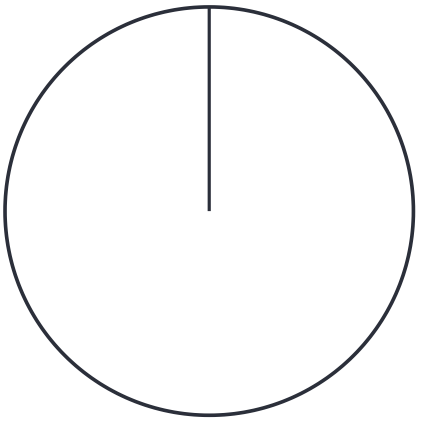
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7 ✎ Complete this question on paper (printed at actual size)

The table gives information about the number of goals scored by each of three teams.

Team	Number of goals
Lions	35
Tigers	20
Bears	17

Draw an accurate pie chart for this information.



Remember Angle for each = frequency × (360 ÷ total). The angles must add up to 360°.

(3)

(Total for Question 7 is 3 marks)

8 $P = 4a + 3b$

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

(a) **Work out** the value of P when $a = 6$ and $b = -5$

.....

(2)

(b) **Work out** the value of b when $P = 41$ and $a = 5$

.....

(2)

(Total for Question 8 is 4 marks)

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9 A test has two papers, Paper 1 and Paper 2

Paper 1 has 80 marks.

Paper 2 has 70 marks.

The pass mark is $\frac{3}{5}$ of the total number of marks.

Zoe gets 65% of the marks for Paper 1

How many of the marks for Paper 2 must Zoe get in order to get the pass mark?

> **Remember** Fraction of an amount: ÷ by the bottom, × by the top. Percentage: 10% = ÷ 10, 1% = ÷ 100, or use a multiplier (35% = 0.35).

.....

(4)

(Total for Question 9 is 4 marks)

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10 Nadia wants to make lemonade.
She is going to buy boxes of lemons.

> There are 18 lemons in each box of lemons.
> 40 lemons make 3 litres of lemonade.

Nadia needs to buy enough lemons to make 9 litres of lemonade.

Remember Add the ratio parts to find the total number of parts. One part = amount ÷ total parts. Then multiply.

(a) **Work out** the number of boxes of lemons that Nadia needs to buy.
You must show all your working.

.....

(3)

(b) Nadia also buys
1080 apples
240 pears
Write down the ratio of the number of apples that Nadia buys to the number of pears that she buys.
Give your ratio **in its simplest form**.

.....

(2)

(Total for Question 10 is 5 marks)

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11 Ana, Bo and Cy share an amount of money.
Bo gets four times as much money as Cy gets.
Bo gets half as much money as Ana gets.
What fraction of the amount of money does Bo get?

.....

(2)

(Total for Question 11 is 2 marks)

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12 Pens and pencils are sold in a shop.

15 pencils cost £2.40

The ratio of the cost of a pen to the cost of a pencil is 9 : 4

Work out the cost of 6 pens.

> **Remember** Add the ratio parts to find the total number of parts. One part = amount ÷ total parts. Then multiply.

£ .....

(4)

(Total for Question 12 is 4 marks)

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13 Each exterior angle of a regular polygon is 20°

Work out the number of sides of the polygon.

.....

(2)

(Total for Question 13 is 2 marks)

TOTAL FOR PAPER IS 36 MARKS

C13 mark scheme

Q		Answer	Mark	Notes
1		$\frac{43}{100}$	B1	
2		83 000	B1	
3		40	B1	
4		No: she arrives at 16 35	M1 M1 C1	M1 for 14 15 + 115 min (= 16 10) M1 for + 25 min (= 16 35) C1 No with 16 35
5		180	M1 M1 A1	M1 for 12 × 5 or 12 × 3 or 5 × 3 M1 for 12 × 5 × 3 A1 for 180 cm^3
6		3	M1 M1 A1	M1 for 5139 ÷ 24 (= 214.1…) M1 for 214 × 24 (= 5136) A1 cao
7		Lions 175°, Tigers 100°, Bears 85°	M1 A1 A1	M1 for 360 ÷ 72 (= 5) A1 for one angle correct A1 fully correct and labelled
8	(a)	9	M1 A1	M1 for 4 × 6 + 3 × −5 A1 cao
	(b)	7	M1 A1	M1 for 41 = 20 + 3*b* A1 cao
9		38	M1 M1 M1 A1	M1 for $\frac{3}{5}$ × 150 (= 90) M1 for 0.65 × 80 (= 52) M1 for 90 − 52 A1 cao
10	(a)	7	M1 M1 A1	M1 for 9 ÷ 3 × 40 (= 120) M1 for 120 ÷ 18 (= 6.6…) A1 cao
	(b)	9 : 2	M1 A1	M1 for 1080 : 240 or a correct part-simplified ratio A1 cao
11		$\frac{4}{13}$	M1 A1	M1 for ratio 8 : 4 : 1 or similar A1 cao

Mark scheme continues ►

Q	Answer	Mark	Notes
12	2.16	M1 M1 M1 A1	M1 for 2.40 ÷ 15 (= 0.16) M1 for 0.16 ÷ 4 × 9 (= 0.36) M1 for 0.36 × 6 A1 cao
13	18	M1 A1	M1 for 360 ÷ 20 A1 cao

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

Score ____ / 36