Half paper C15

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** 83% as a fraction.

.....

(1)

(Total for Question 1 is 1 mark)

---

2 **Change** 4.5 metres into centimetres.

..... centimetres

(1)

(Total for Question 2 is 1 mark)

---

3 **Write** the following numbers in order of size.
Start with the smallest number.

2.03 0.23 2.30 0.32

.....

(1)

(Total for Question 3 is 1 mark)

Turn over ►

4 A café has three bags of sugar, **A**, **B** and **C**.
Bag **A** and bag **B** contain the same amount of sugar.
Bag **C** contains 1150 g of sugar.
In the three bags, there is a total of 3000 g of sugar.
Work out the amount of sugar in bag **A**.

> **Remember** Line up the digits. To divide by a decimal, multiply both numbers by 10 (or 100) first. Check with an estimate.

..... g

(3)

(Total for Question 4 is 3 marks)

---

5 4 students throw a dice.
They each throw the dice the same number of times.
The diagram gives information about the number of times the dice lands on each number.



Work out how many times each student throws the dice.

> **Remember** Check the scale on the axis: what does one square stand for? Label bars and use a ruler.

.....

(3)

(Total for Question 5 is 3 marks)

6

Remember Use brackets for the top and the bottom of a fraction. Write down every digit on the display.

(a) **Work out** $\sqrt{\left(\frac{17.65}{3.92}\right)}$

Write down all the figures on your calculator display.

.....

(2)

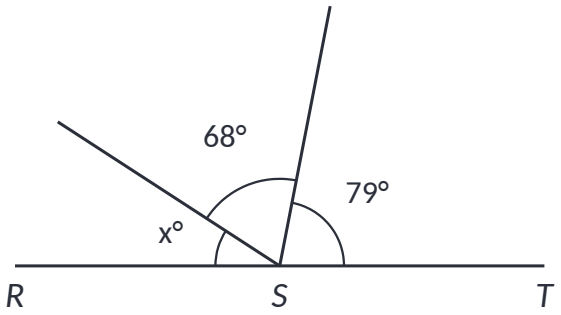
(b) Give your answer to part (a) **correct to 2 decimal places**.

.....

(1)

(Total for Question 6 is 3 marks)

7 *RST* is a straight line.



Remember Straight line = 180°. Around a point = 360°. Triangle = 180°. Quadrilateral = 360°. Isosceles: two equal base angles. Write the reason for each angle.

(a) **Work out** the value of *x*.

x = ...

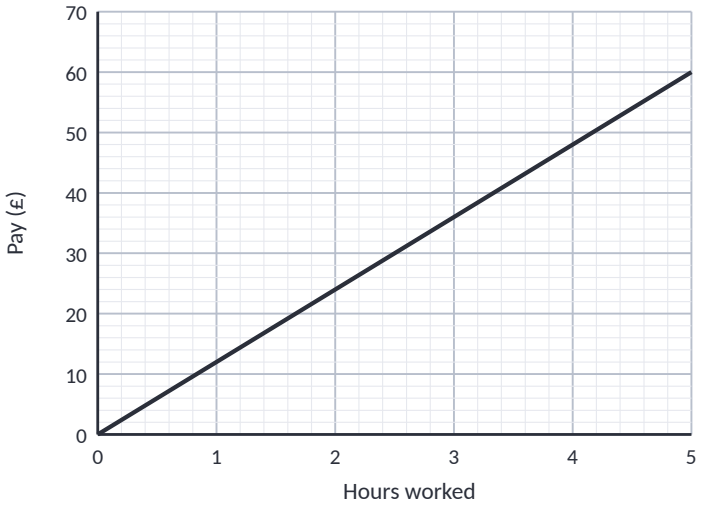
(2)

(b) **Give a reason for your answer**.

(1)

(Total for Question 7 is 3 marks)

8 Jade uses this graph to find out how much money she is paid for the number of hours she has worked.



Remember Go across from one axis to the line, then down (or across) to read the other value. For a big value, use a smaller one and multiply.

(a) How much money is Jade paid for each hour she works?

£ .....

(1)

(b) Last week Jade worked for 32 hours.
How much money was Jade paid?

£ .....

(2)

(Total for Question 8 is 3 marks)

9 **Write** the following fractions in order of size.
Start with the smallest fraction.

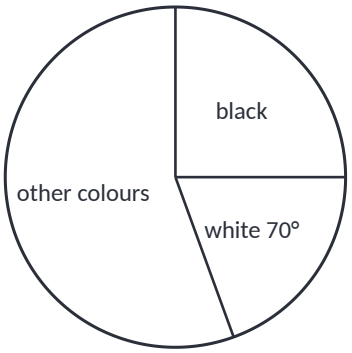
$$\frac{3}{4} \quad \frac{5}{8} \quad \frac{7}{10} \quad \frac{2}{3}$$

.....

(2)

(Total for Question 9 is 2 marks)

10 The pie chart gives information about the colour of each car in a car park.
The angle for black cars is 90°.



There are 108 black cars in the car park.

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

(a) **Work out** the number of white cars in the car park.

.....

(3)

(b) There are 60 grey cars in the car park.
A car in the car park is picked at random.
Find the probability that this car is grey.

.....

(2)

(Total for Question 10 is 5 marks)

11 The incomplete table gives some information about the lengths of the planks of wood in a workshop.

Length of plank (metres)	Number of planks
3	4
2.5	6
2	
1.5	10
1	8

The total length of these planks is 80 metres.

Work out the number of planks of length 2 metres in the workshop.

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

.....

(3)

(Total for Question 11 is 3 marks)

---

12 Amy, Ben and Cat share £900 between them.

Amy gets $\frac{1}{3}$ of the £900

Ben gets $\frac{2}{5}$ of the money that is left over.

Cat gets the rest of the money.

Cat says,

"I would have got more money if we had shared the £900 equally between us."

Is Cat correct?

You must show how you get your answer.

> **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 12 is 4 marks)

13

> **Remember** Use a factor tree. HCF = the primes both numbers share. LCM = the smallest number in both times tables.

(a) **Find** the Highest Common Factor (HCF) of 72 and 90

.....

(2)

(b) **Find** the Lowest Common Multiple (LCM) of 18 and 30

.....

(2)

(Total for Question 13 is 4 marks)

TOTAL FOR PAPER IS 36 MARKS

C15 mark scheme

Q		Answer	Mark	Notes
1		$\frac{83}{100}$	B1	
2		450	B1	
3		0.23, 0.32, 2.03, 2.30	B1	
4		925	M1 M1 A1	M1 for 3000 − 1150 (= 1850) M1 for 1850 ÷ 2 A1 cao
5		9	M1 M1 A1	M1 for reading at least 4 frequencies correctly M1 for 36 ÷ 4 A1 cao
6	(a)	2.121921539...	M1 A1	M1 for 4.50... seen A1 for 2.1219...
	(b)	2.12	B1	
7	(a)	33	M1 A1	M1 for 180 − 68 − 79 A1 cao
	(b)	Angles on a straight line add up to 180°	C1	C1
8	(a)	12	B1	
	(b)	384	M1 A1	M1 for 32 × 12 A1 cao
9		$\frac{5}{8}, \frac{2}{3}, \frac{7}{10}, \frac{3}{4}$	M1 A1	M1 for converting to decimals or a common denominator A1 cao
10	(a)	84	M1 M1 A1	M1 for 108 ÷ 90 (= 1.2) M1 for 1.2 × 70 A1 cao
	(b)	$\frac{60}{432} = \frac{5}{36}$	M1 A1	M1 for 108 × 4 (= 432) A1 cao
11		15	M1 M1 A1	M1 for 12 + 15 + 15 + 8 (= 50) M1 for (80 − 50) ÷ 2 A1 cao

Mark scheme continues ►

Q		Answer	Mark	Notes
12		**No: Cat gets £360, equal shares would be £300**	M1 M1 M1 C1	M1 for 900 ÷ 3 (= 300) M1 for 2/5 × 600 (= 240) M1 for 900 − 300 − 240 (= 360) C1 No with 360 and 300
13	(a)	**18**	M1 A1	M1 for factors or prime factors of 72 and 90 A1 cao
	(b)	**90**	M1 A1	M1 for multiples of 18 and 30 A1 cao

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

Score ____ / 36