Half paper N3

Paper 1 style · Non-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 must **not** 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** 25 609 **correct to the nearest thousand**.

.....

(1)

(Total for Question 1 is 1 mark)

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2 **(a)** **Write** the following numbers in order of size.
Start with the smallest number.

4 −2 −11 1 −3

.....

(1)

(b) **Write** the following numbers in order of size.
Start with the smallest number.

0.6 0.06 0.66 0.606

.....

(1)

(Total for Question 2 is 2 marks)

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3 **Write** 45% as a fraction.

.....

(1)

(Total for Question 3 is 1 mark)

Turn over ►

4 Here is a list of four fractions.

$$\frac{2}{10} \quad \frac{3}{15} \quad \frac{5}{20} \quad \frac{4}{20}$$

One of these fractions is **not** equivalent to $\frac{1}{5}$

Write down this fraction.

.....

(1)

(Total for Question 4 is 1 mark)

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5 **Write down** the first multiple of 8 that is greater than 50

.....

(1)

(Total for Question 5 is 1 mark)

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6 Jo and four friends go on holiday together for a week.
The 5 friends will share the costs of the holiday equally.
Here are the costs of the holiday.

£650 for 5 return train tickets
£900 for the cottage
£300 for food for the week

Work out how much Jo has to pay for her share of the costs.

> **Remember** Write down each cost or amount as you work it out, then add them up. Write money with 2 decimal places (£4.50). 100p = £1.

£ .....

(3)

(Total for Question 6 is 3 marks)

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7 A piece of rope is 300 cm long.
Sam cuts three 35 cm lengths off the rope.
He then cuts the rest of the rope into as many 30 cm lengths as possible.
Work out how many 30 cm lengths of rope Sam cuts.

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

.....

(3)

(Total for Question 7 is 3 marks)

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8 Amy, Ben and Cat each earn the same monthly salary.
Each month,

Amy **saves** 25% of her salary and spends the rest of her salary

Ben spends $\frac{7}{10}$ of his salary and **saves** the rest of his salary

the amount of salary Cat saves : the amount of salary she spends = 2 : 7

Work out who saves the most of their salary each month.
You must show how you get your answer.

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

(4)

(Total for Question 8 is 4 marks)

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9 **Work out** 35% of 240 grams.

..... grams

(2)

(Total for Question 9 is 2 marks)

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10 $P = 3x + 5y$

$x = 4 \quad y = -3$

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

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

$P =$ .....

(2)

(b) **Expand** $5f(f - 3)$

.....

(2)

(c) **Solve** $4(n + 2) = 30$

$n =$ .....

(2)

(Total for Question 10 is 6 marks)

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11 There are some biscuits in a tin.

$\frac{1}{5}$ of the biscuits contain chocolate.

The rest of the biscuits do not contain chocolate.

Write down the ratio of the number of biscuits that contain chocolate to the number of biscuits that do not contain chocolate.

Give your answer in the form 1 : n

.....

(2)

(Total for Question 11 is 2 marks)

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12 A = {multiples of 4 between 10 and 30}
B = {even numbers between 15 and 25}

> **Remember** Fill the overlap (in both) first. Every number from ξ goes somewhere, even outside the circles.

(a) **List** the members of $A \cup B$

.....

(2)

(b) **Describe** the members of $A \cap B$

.....

(1)

(Total for Question 12 is 3 marks)

13

> **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.

(a) **Work out** $3\frac{2}{5} + 1\frac{1}{3}$

.....

(2)

(b) **Work out** $1\frac{2}{3} \div \frac{3}{4}$

Give your answer **as a mixed number** **in its simplest form**.

.....

(2)

(Total for Question 13 is 4 marks)

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14 In a town

the number of houses and the number of flats are in the ratio 5 : 3

the number of flats and the number of bungalows are in the ratio 6 : 1

There are 40 bungalows in the town.
How many houses are there in the town?

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

.....

(3)

(Total for Question 14 is 3 marks)

TOTAL FOR PAPER IS 36 MARKS

N3 mark scheme

Q		Answer	Mark	Notes
1		26 000	B1	
2	(a)	−11, −3, −2, 1, 4	B1	
	(b)	0.06, 0.6, 0.606, 0.66	B1	
3		$\frac{45}{100}$ or $\frac{9}{20}$	B1	
4		$\frac{5}{20}$	B1	
5		56	B1	
6		370	M1 M1 A1	M1 for 650 + 900 + 300 (= 1850) M1 for 1850 ÷ 5 A1 cao
7		6	M1 M1 A1	M1 for 300 − 3 × 35 (= 195) M1 for 195 ÷ 30 (= 6.5) A1 for 6
8		Ben (saves 30%, compared with 25% for Amy and 22.2% for Cat)	M1 M1 M1 C1	M1 for Ben saves $\frac{3}{10}$ (= 30%) M1 for Cat saves $\frac{2}{9}$ M1 for converting to a comparable form C1 Ben with correct figures
9		84	M1 A1	M1 for 10% = 24 and 5% = 12 or equivalent A1 cao
10	(a)	−3	M1 A1	M1 for 3 × 4 + 5 × −3 A1 cao
	(b)	$5f^2 - 15f$	B2	B2 (B1 for one term correct)
	(c)	5.5	M1 A1	M1 for $4n + 8 = 30$ or $n + 2 = 7.5$ A1 oe
11		1 : 4	M1 A1	M1 for $\frac{4}{5}$ do not contain chocolate A1 cao

Mark scheme continues ►

Q		Answer	Mark	Notes
12	(a)	**12, 16, 18, 20, 22, 24, 28**	**B2**	B2 (B1 for one error or omission)
	(b)	**Multiples of 4 between 15 and 25 (16, 20, 24)**	**B1**	
13	(a)	$4\frac{11}{15}$	**M1** **A1**	M1 for a common denominator of 15 A1 oe
	(b)	$2\frac{2}{9}$	**M1** **A1**	M1 for $\frac{5}{3} \times \frac{4}{3}$ A1 cao
14		**400**	**M1** **M1** **A1**	M1 for flats = 40 × 6 (= 240) M1 for 240 ÷ 3 × 5 A1 cao

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

Score ____ / 36