Half paper N5

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** 150 minutes in hours.

..... hours

(1)

(Total for Question 1 is 1 mark)

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2 **Write** 0.04 as a percentage.

..... %

(1)

(Total for Question 2 is 1 mark)

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3 **Work out** 20 − (8 − 3)

.....

(1)

(Total for Question 3 is 1 mark)

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4 **Find** the number that is exactly halfway between −4 and 10

.....

(1)

(Total for Question 4 is 1 mark)

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5 Amy left her home at 2 pm and walked to the park.
She got to the park at 4.30 pm.
Amy walked at a speed of 3 mph.

> **Remember** Speed = distance ÷ time. Distance = speed × time. Time = distance ÷ speed. Change minutes to hours: ÷ 60 (30 min = 0.5 h).

(a) **Work out** the distance Amy walked.

..... miles
(2)

(b) Amy stayed at the park for 40 minutes.
Then she walked home.
Amy took $2\frac{1}{2}$ hours to walk home.
At what time did Amy get home?

.....
(2)

(Total for Question 5 is 4 marks)

6

> **Remember** Do the same to both sides. Undo + with −, undo × with ÷. Expand brackets first.

(a) **Solve** $t + t + t + t = 28$

$t =$ .....
(1)

(b) **Solve** $x - 5 = 9$

$x =$ .....
(1)

(c) **Solve** $4w + 3 = 23$

$w =$ .....
(2)

(Total for Question 6 is 4 marks)

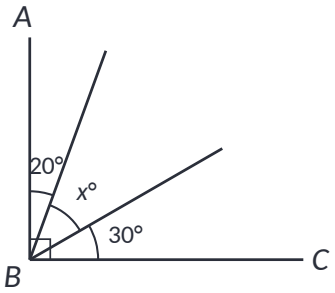
7 **Work out** 63×47

.....

(2)

(Total for Question 7 is 2 marks)

8 AB and BC are perpendicular lines.



Find the value of x.

$x =$ .....

(2)

(Total for Question 8 is 2 marks)

9 The length of a line is y metres.
Write down an expression, **in terms of y**, for the length of the line in centimetres.

.....

(1)

(Total for Question 9 is 1 mark)

10 **(a)** **Expand** $4(3k - 5)$

.....

(1)

(b) **Factorise** $5n + 20$

.....

(1)

(Total for Question 10 is 2 marks)

11 The diagram shows a rectangular patio.



Leo is going to cover the patio with paving stones.
Each paving stone is a square of side 30 cm.
Each paving stone costs £1.50
Leo has £240 to spend on paving stones.
Show that he has enough money to buy all the paving stones he needs.

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

(4)

(Total for Question 11 is 4 marks)

12

> **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** $\frac{3}{4} - \frac{2}{7}$

.....

(2)

(b) **Work out** $\frac{3}{5} \times \frac{5}{9}$

Give your answer as a fraction **in its simplest form**.

.....

(2)

(Total for Question 12 is 4 marks)

13 There are 40 students in a class.
Each student walks to school or cycles to school or gets the bus to school.

There are 18 boys in the class.
8 of the boys walk to school.
5 of the girls cycle to school.
7 of the 12 students who get the bus to school are girls.

Find the number of these students who walk to school.

> **Remember** Rows and columns add up to the totals. Fill in the easy gaps first, then use them to find the rest.

.....

(4)

(Total for Question 13 is 4 marks)

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14 **Find** the highest common factor (HCF) of 84 and 120

.....

(2)

(Total for Question 14 is 2 marks)

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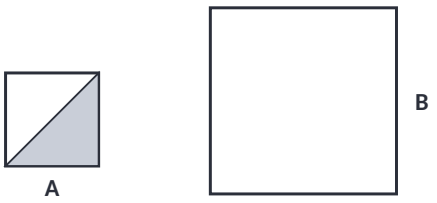
15 Here are two squares, **A** and **B**.



The length of the side of square **A** is 50% of the length of the side of square **B**.
Express the area of the shaded region of square **A** as a percentage of the area of square **B**.

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

..... %

(3)

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 36 MARKS

N5 mark scheme

Q		Answer	Mark	Notes
1		2.5	B1	
2		4	B1	
3		15	B1	
4		3	B1	
5	(a)	7.5	M1 A1	M1 for 2.5 hours × 3 A1 cao
	(b)	7.40 pm	M1 A1	M1 for 4.30 + 40 min (= 5.10 pm) A1 cao
6	(a)	7	B1	
	(b)	14	B1	
	(c)	5	M1 A1	M1 for $4w = 20$ A1 cao
7		2961	M1 A1	M1 for a complete method with no more than one error A1 cao
8		40	M1 A1	M1 for 90 − 20 − 30 A1 cao
9		100y	B1	
10	(a)	$12k - 20$	B1	
	(b)	$5(n + 4)$	B1	
11		30 × 5 = 150 stones, costing £225, which is less than £240	M1 M1 M1 C1	M1 for 900 ÷ 30 (= 30) or 150 ÷ 30 (= 5) M1 for 30 × 5 (= 150) M1 for 150 × 1.50 (= 225) C1 225 and a conclusion

Mark scheme continues ►

Q		Answer	Mark	Notes
12	(a)	$\frac{13}{28}$	M1 A1	M1 for a common denominator of 28 A1 cao
	(b)	$\frac{1}{3}$	M1 A1	M1 for $\frac{15}{45}$ A1 cao
13		18	M1 M1 M1 A1	M1 for 22 girls M1 for girls who walk = 22 − 5 − 7 (= 10) M1 for 8 + 10 A1 cao
14		12	M1 A1	M1 for prime factors of both or listing factors A1 cao
15		12.5	M1 M1 A1	M1 for using sides, e.g. 2 and 4 (areas 4 and 16) M1 for shaded area = half of A (= 2) A1 for 12.5

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

Score ____ / 36