Half paper N1

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 **Work out** the value of 5^3

.....

(1)

(Total for Question 1 is 1 mark)

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2 **Write** 3.478 52 **correct to 2 decimal places**.

.....

(1)

(Total for Question 2 is 1 mark)

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3 **(a)** **Simplify** $3 \times m \times n \times 9$

.....

(1)

(b) **Solve** $\frac{x}{3} = 4\frac{1}{3}$

$x =$ .....

(1)

(Total for Question 3 is 2 marks)

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

..... %

(1)

(Total for Question 4 is 1 mark)

Turn over ►

5 **Work out** 40% of 85

.....

(2)

(Total for Question 5 is 2 marks)

6 A baker has 15 trays of cakes.
There are 8 cakes on each tray.
Write, as a ratio, the number of cakes on three trays to the total number of cakes.
Give your answer in its simplest form.

.....

(2)

(Total for Question 6 is 2 marks)

7 There are only 5 red pencils, 9 green pencils and 3 yellow pencils in a pot.
One pencil is taken at random from the pot.
Write down the probability that this pencil is green.

.....

(2)

(Total for Question 7 is 2 marks)

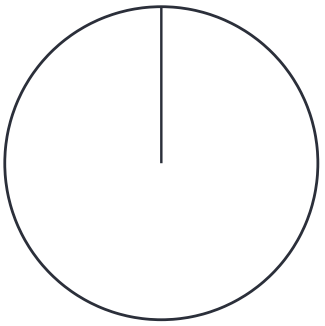
8 ✎ Complete this question on paper (printed at actual size)

Year 10 students at Park School were asked to choose one sport.
The table shows information about their choices.

Sport	Number of students	
Football	50	
Tennis	30	
Swimming	40	

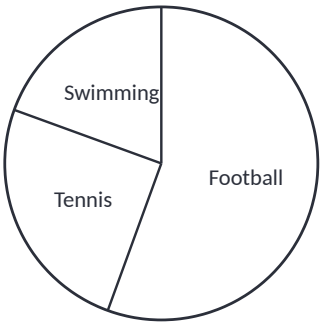
Remember Angle for each = frequency × (360 ÷ total). The angles must add up to 360°.

(a) **Draw** an accurate pie chart to show this information.



(3)

(b) Year 10 students at Hill School were also asked to choose one sport.
This accurate pie chart shows information about their choices.



Ella says,

> "The pie chart shows that Football was chosen by more students at Hill School than at Park School."

Is Ella right?
You must explain your answer.

(1)

(Total for Question 8 is 4 marks)

9 Here are a triangle and a rectangle.

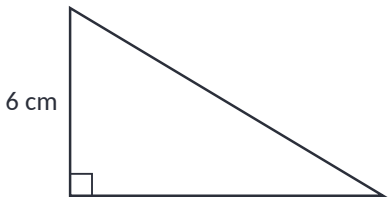


Diagram NOT accurately drawn



The area of the rectangle is 4 times the area of the triangle.

Work out the width of the rectangle.

> **Remember** Triangle = ½ × base × height. Trapezium = ½ × (a + b) × height. Use the perpendicular height.

..... cm

(4)

(Total for Question 9 is 4 marks)

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10 $v = u + at$

$u = 2 \quad a = -4 \quad t = \frac{3}{4}$

Work out the value of v.

$v =$ .....

(2)

(Total for Question 10 is 2 marks)

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11 6 tins of beans have a total weight of 2400 grams.

3 tins of beans and 4 packets of pasta have a total weight of 1680 grams.

Work out the total weight of 2 tins of beans and 5 packets of pasta.

> **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.

..... grams

(4)

(Total for Question 11 is 4 marks)

12

Remember Solve like an equation. On a number line: ● means "included" (⩽ or ⩾), ○ means "not included" (< or >).

(a) **Solve** $3(x - 4) = 21$

$x =$ .....

(2)

(b) $-2 \leqslant t < 3$
t is an integer.
Write down all the possible values of t.

.....

(2)

(Total for Question 12 is 4 marks)

13 Kai is paid £1800 per month.
He is going to get a 4% increase in the amount of money he is paid.
Work out how much money Kai will be paid per month after the increase.

£ .....

(2)

(Total for Question 13 is 2 marks)

14 **Express** 84 as the product of its prime factors.

.....

(2)

(Total for Question 14 is 2 marks)

15 **Work out** 47.3×6.2

> **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 15 is 3 marks)

TOTAL FOR PAPER IS 36 MARKS

N1 mark scheme

Q		Answer	Mark	Notes
1		125	B1	
2		3.48	B1	
3	(a)	$27mn$	B1	
	(b)	13	B1	
4		60	B1	
5		34	M1 A1	M1 for 10% = 8.5 or 0.4 × 85 A1 cao
6		1 : 5	M1 A1	M1 for 24 : 120 A1 cao
7		$\frac{9}{17}$	M1 A1	M1 for a denominator of 17 A1 oe
8	(a)	Football 150°, Tennis 90°, Swimming 120°, labelled	M1 A1 B1	M1 for 360 ÷ 120 (= 3) A1 for correct angles B1 for a correct labelled pie chart
	(b)	Not necessarily: we do not know how many students there are at Hill School	C1	C1
9		8	M1 M1 M1 A1	M1 for ½ × 10 × 6 (= 30) M1 for 4 × 30 (= 120) M1 for 120 ÷ 15 A1 cao
10		−1	M1 A1	M1 for 2 + −4 × ¾ A1 cao
11		1400	M1 M1 M1 A1	M1 for 2400 ÷ 6 (= 400) M1 for (1680 − 1200) ÷ 4 (= 120) M1 for 2 × 400 + 5 × 120 A1 cao

Mark scheme continues ►

Q		Answer	Mark	Notes
12	(a)	11	M1 A1	M1 for $3x - 12 = 21$ or $x - 4 = 7$ A1 cao
	(b)	−2, −1, 0, 1, 2	B2	B2 (B1 for 4 correct and none wrong, or 5 correct and one wrong)
13		1872	M1 A1	M1 for 0.04×1800 (= 72) A1 cao
14		$2 \times 2 \times 3 \times 7$	M1 A1	M1 for a factor tree or repeated division A1 for $2^2 \times 3 \times 7$ oe
15		293.26	M1 M1 A1	M1 for a complete method (e.g. $473 \times 62 = 29\,326$) M1 for placing the decimal point A1 cao

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

Score ____ / 36