1. Nov/2023/Paper_0444/23/No.4

The table shows the homework marks of a group of students.

Homework mark	5	6	7	8
Frequency	1	3	1	5

Find

(a) the range

..... [1]

(b) the mode

..... [1]

(c) the median

..... [1]

(d) the mean.

..... [3]

2. Nov/2023/Paper_0444/23/No.8

Rama asks a group of students how they travel to school.
The table shows the probability of how a student, chosen at random, travels to school.

	Bus	Walk	Car	Other
Probability	0.4	0.2	0.1	

(a) Complete the table.

[2]

(b) There are 1000 students at the school.

Find the expected number of students that walk to school.

..... [1]

3. Nov/2023/Paper_0444/23/No.20

The following probabilities are given for events A and B.

$$P(A) = 0.2 \qquad P(B) = 0.1 \qquad P(A \text{ and } B) = 0.05$$

(a) Find $P(A \text{ or } B)$.

..... [2]

(b) Show that A and B are not independent.

[1]

4. Nov/2023/Paper_0444/43/No.2

The table shows the number of each type of bird seen in a garden on Monday.

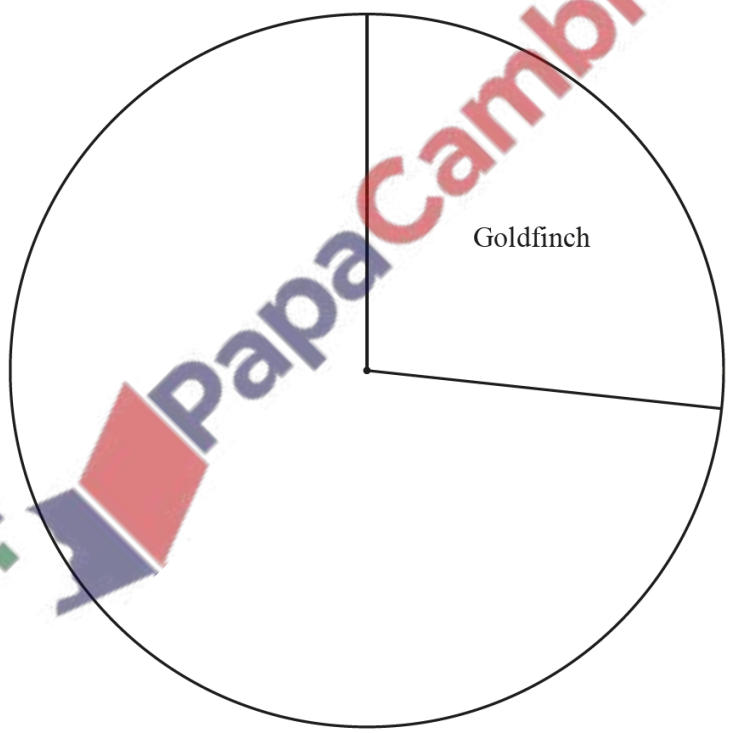
Type of bird	Frequency	Pie chart sector angle
Goldfinch	8	96°
Jay	6	
Starling	11	
Robin	5	

(a) Find the percentage of the birds that are Starlings.

..... % [2]

(b) **(i)** In the table, complete the column for the pie chart sector angle. [2]

(ii) Complete the pie chart to show the information in the table.



[2]

(c) On Tuesday, the number of Goldfinches seen in the garden increased by 262.5%.

Calculate the number of Goldfinches seen on Tuesday.

..... [2]

(d) One of the most common birds in the world is the Red-Billed Quelea which lives in Sub-Saharan Africa.
There are approximately 1500 million of these birds in this area.

(i) Write 1500 million in scientific notation.

..... [1]

(ii) The land area of Sub-Saharan Africa is approximately 21.2 million square kilometers.

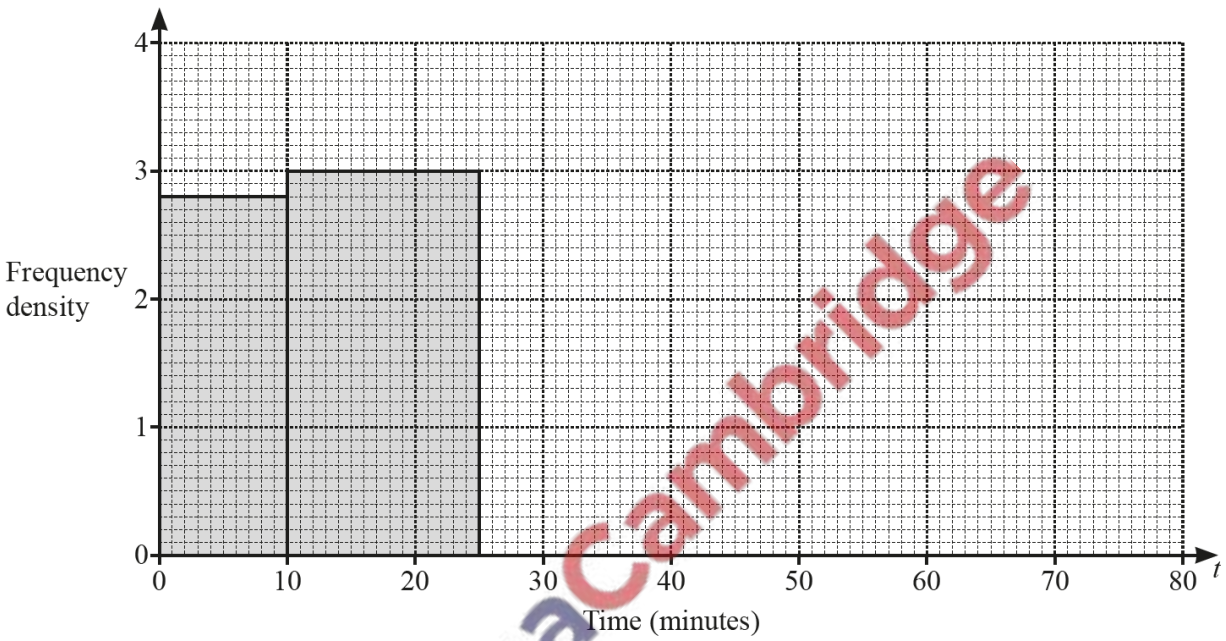
Work out the average number of these birds per square kilometer.

..... birds/km^2 [2]

5. Nov/2023/Paper_0444/43/No.5

Indira records the time taken for workers in her company to travel to work.
The table and the histogram each show part of this information.

Time (t minutes)	$0 < t \leqslant 10$	$10 < t \leqslant 25$	$25 < t \leqslant 40$	$40 < t \leqslant 60$	$60 < t \leqslant 80$
Frequency			57	38	12



(a) Complete the table and the histogram.

[5]

(b) Calculate an estimate of the mean time.

..... min [4]

(c) Rashid says:

"The longest time that any of these workers take to travel to work is 80 minutes."

Give a reason why Rashid may be wrong.

.....

..... [1]

(d) Indira picks three workers at random from those who take longer than 25 minutes to travel to work.

Calculate the probability that one worker takes 60 minutes or less and the other two each take more than 60 minutes.

..... [4]