

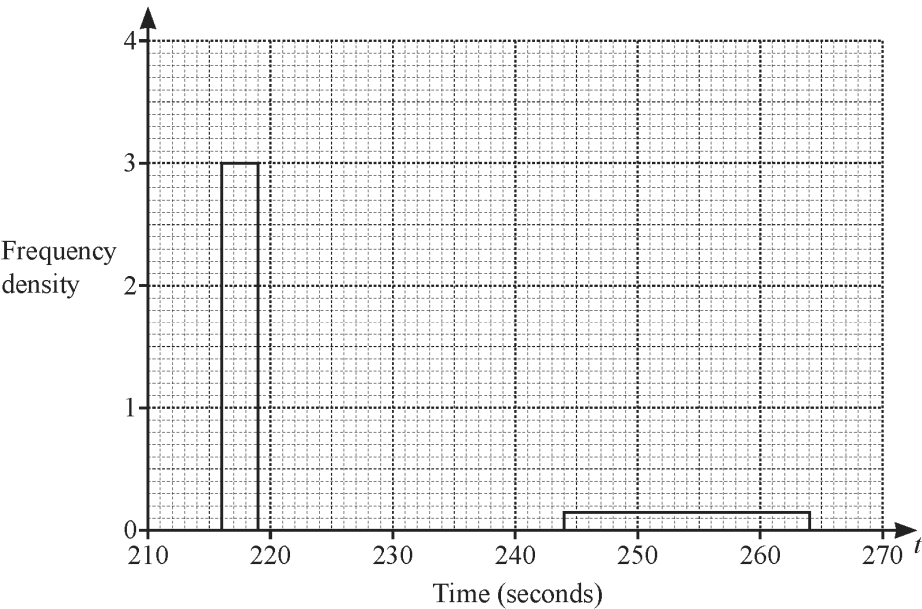
The frequency table shows the time of each of 42 athletes in a race.

Time (t seconds)	Number of athletes
$216 < t \leq 219$	9
$219 < t \leq 224$	14
$224 < t \leq 234$	14
$234 < t \leq 244$	2
$244 < t \leq 264$	3

(a) Calculate an estimate of the mean time.

..... seconds [4]

(b) Complete the histogram to show the information in the frequency table.
Two of the blocks have been drawn for you.

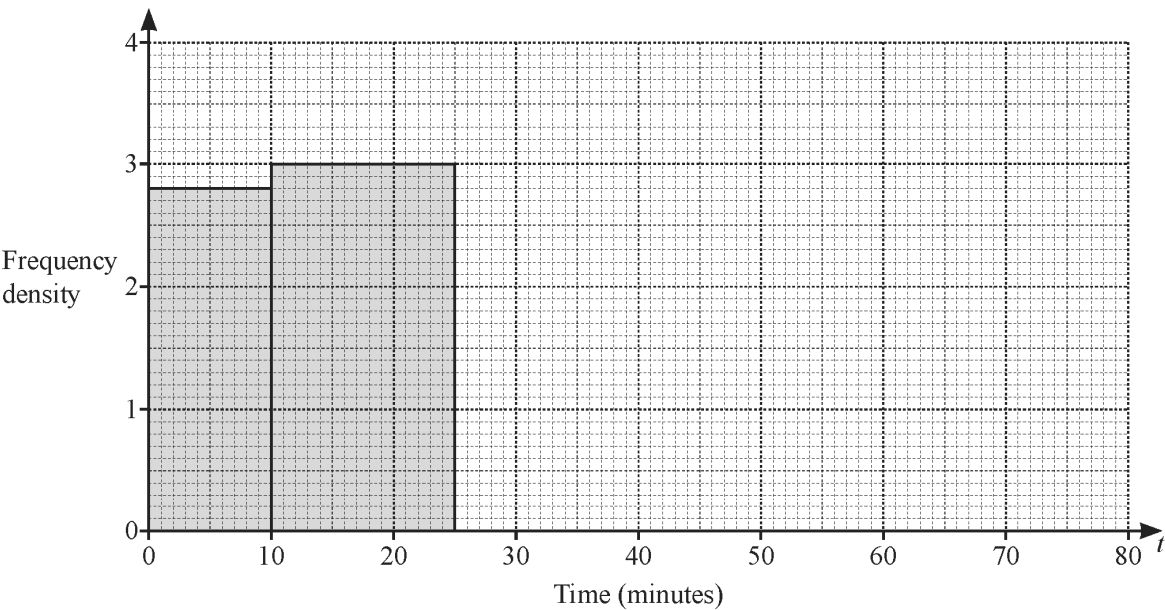


[3]

43 - (0580/43_Winter_2023_Q5) - Statistics, Probability

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)	$0 < t \leq 10$	$10 < t \leq 25$	$25 < t \leq 40$	$40 < t \leq 60$	$60 < t \leq 80$
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]

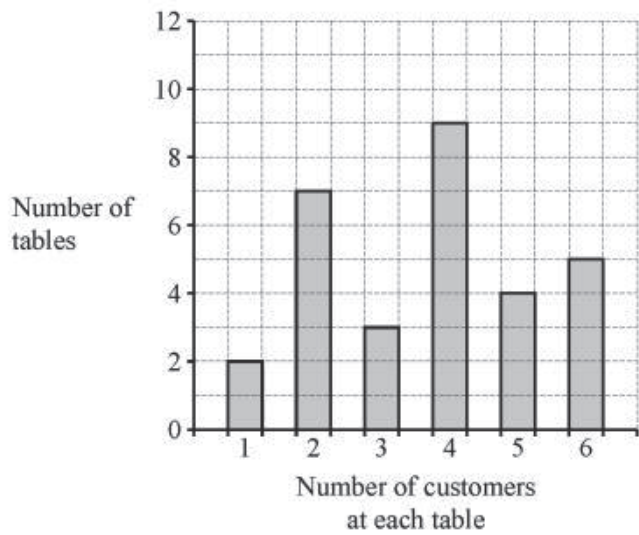
(d) Indira picks three workers at random from those who take longer than 25 minutes to travel to work.

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

..... [4]

48 - (0580/33_Summer_2022_Q6) - Statistics

Maria owns a restaurant with 30 tables.
One day she records the number of customers at each table at 7 pm.
The bar chart shows the results.



- (a) (i) Write down the mode.

..... [1]
- (ii) Find the range.

..... [1]
- (iii) Calculate the mean.

..... [3]

(b) On the same day she also recorded the number of customers at each table at 1 pm.
The results are shown in the table.

Number of customers at each table	1	2	3	4	5	6
Number of tables	8	13	5	4	0	0

Write down two comments comparing the results from 7 pm with the results from 1 pm.

1.
2. [2]

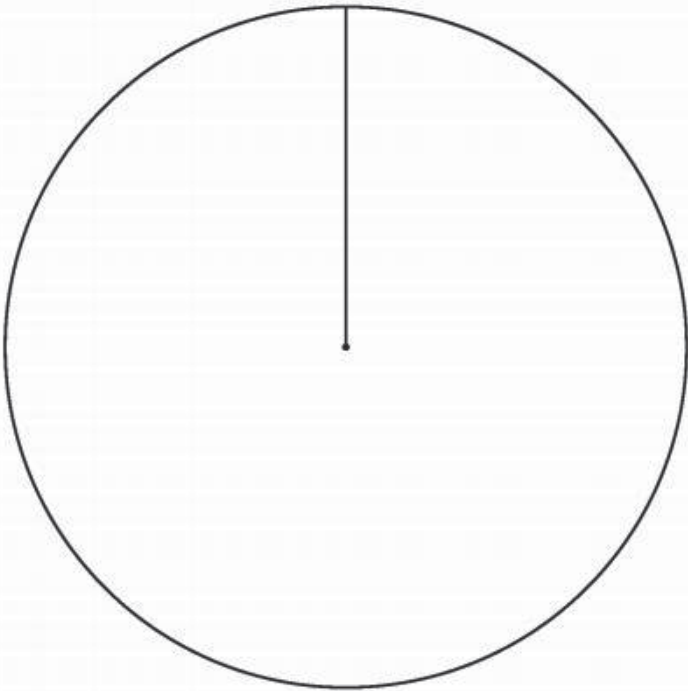
- (c) 270 meals are ordered one day at the restaurant.
The table shows the number of each type of meal.

Meal	Number ordered	Pie chart sector angle
Meat	117	
Fish	99	
Vegetarian	54	72°

- (i) Complete the table.

[2]

- (ii) Complete the pie chart.



[2]

49 - (0580/31_Winter_2022_Q3) - *Speed, distance And Time, Mensuration, Statistics*

Miguel works in an office.

(a) It takes Miguel 40 minutes to drive to work.

(i) He leaves home at 0745.

What time does he arrive at work?

..... [1]

(ii) Miguel drives to work at an average speed of 57 km/h.

Show that he drives 38 km.

[2]

(b) White paper costs w cents per sheet and pink paper costs p cents per sheet.
Miguel uses 56 sheets of white paper and 21 sheets of pink paper.

Write down an expression, in terms of w and p , for the total cost, in cents, of the paper he uses.

..... cents [2]

(c) Miguel has a closed box of pens.
The box is in the shape of a cuboid measuring 20 cm by 12 cm by 7 cm.

Calculate the surface area of the box.

..... cm^2 [3]

(d) Miguel records the length of time of each telephone call he receives, correct to the nearest minute.

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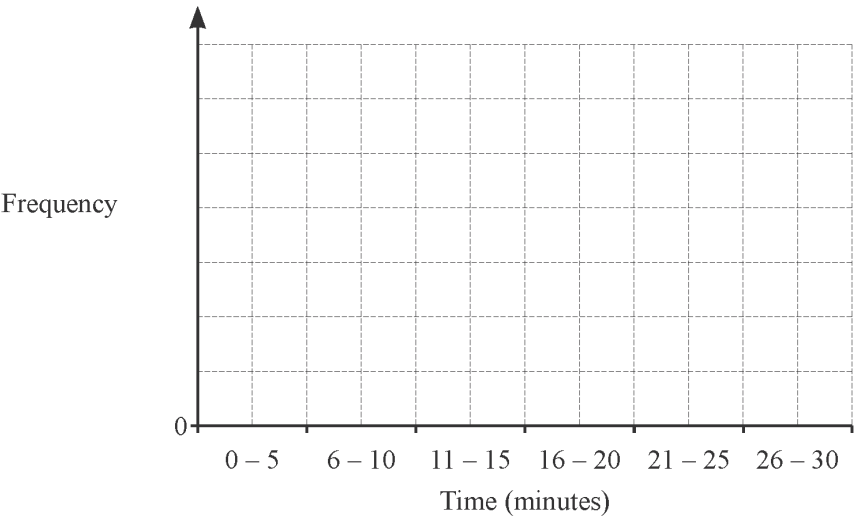
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- (i) Complete the frequency table.
You may use the tally column to help you.

Time (minutes)	Tally	Frequency
0 – 5		
6 – 10		
11 – 15		
16 – 20		
21 – 25		
26 – 30		

[2]

- (ii) Draw a bar chart to show this information.
Complete the scale on the frequency axis.



[3]

- (iii) Use the bar chart to write down the modal group.

..... — [1]

50 - (0580/31_Winter_2022_Q5) - Statistics, Probability

(a) The table shows the number of items sold to each of 60 customers in a shop.

Number of items sold	Frequency
0	3
1	6
2	12
3	8
4	14
5	10
6	3
7	4

(i) Find the range.

..... [1]

(ii) Calculate the mean.

..... [3]

(iii) Find the probability that a customer picked at random buys more than 4 items.

..... [2]