

## HISTOGRAMS – PRACTICE QUESTIONS



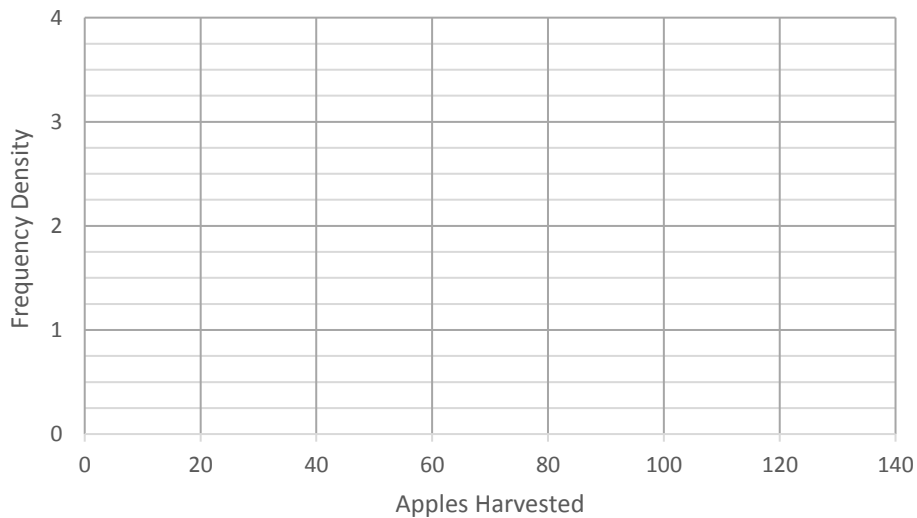
metatutor

1.

The frequency table below shows the number of apples harvested from 120 apple trees in an orchard.

Apples Harvested	Frequency	Frequency Density
$0 \leq x < 40$	10	0.25
$40 \leq x < 60$	15	
$60 \leq x < 80$	45	
$80 \leq x < 100$	40	
$100 \leq x < 140$	10	

Complete the table and plot a histogram on the axis below.

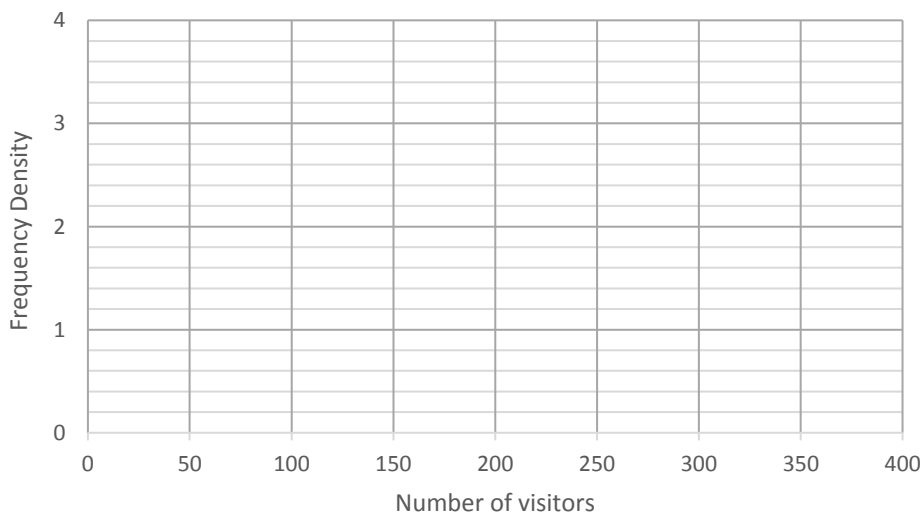


2.

The frequency table below shows the number of visitors to a museum in the last 300 days.

Number of visitors	Frequency	Frequency Density
$0 \leq x < 100$	40	
$100 \leq x < 150$	130	
$150 \leq x < 200$	90	
$200 \leq x < 400$	40	

Complete the table and plot a histogram on the axis below.



3. The frequency table below shows Adam's calorie intake over the last 250 days.

<b>Calorie Intake</b>	<b>Frequency</b>
$1,000 \leq x < 2,000$	20
$2,000 \leq x < 2,250$	25
$2,250 \leq x < 2,500$	75
$2,500 \leq x < 2,750$	100
$2,750 \leq x < 3,500$	30

Use the information to plot a histogram on the axis below.



4. The frequency table below shows the number of hours of overtime 800 employees worked in the past year.

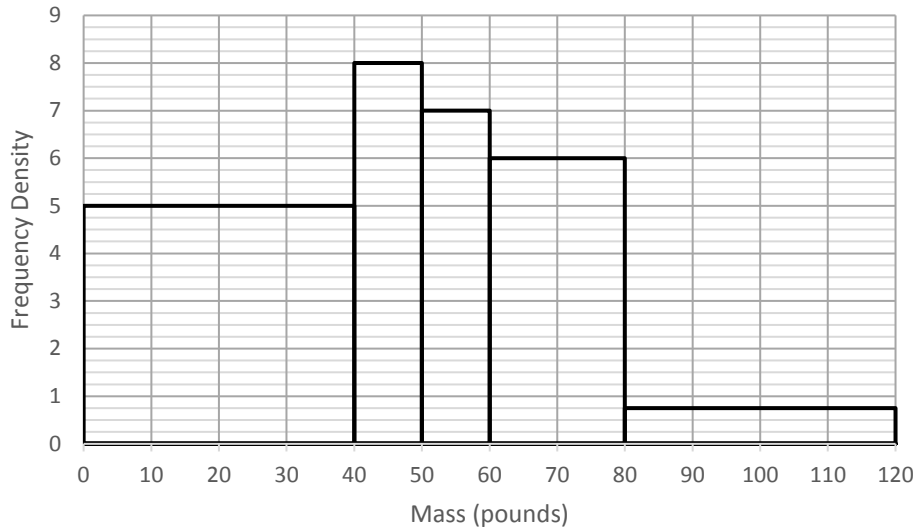
<b>Number of hours</b>	<b>Frequency</b>
$0 \leq x < 50$	280
$50 \leq x < 100$	200
$100 \leq x < 150$	110
$150 \leq x < 200$	90
$200 \leq x < 500$	120

Use the information to plot a histogram on the axis below.



5.

The histogram below shows the weights (in pounds) of 500 fish caught by a fisherman.

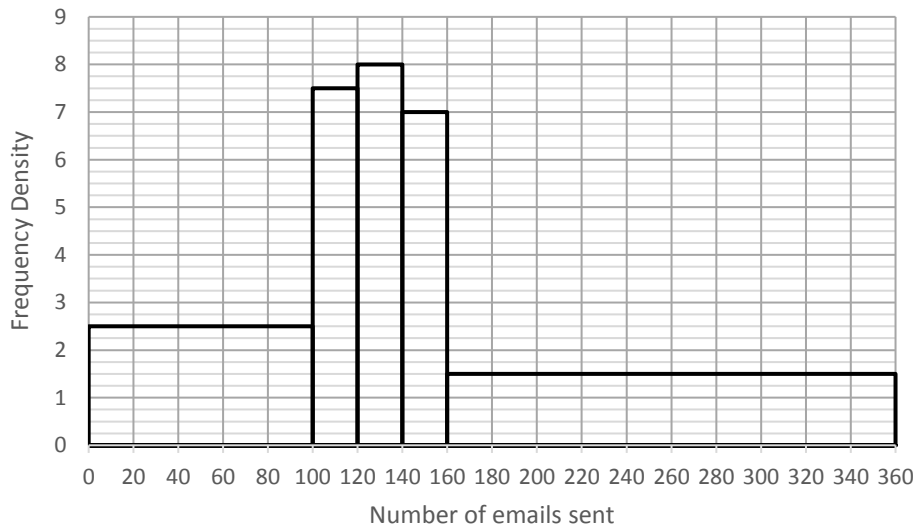


Use the histogram to complete the table below.

<b>Mass (pounds)</b>	<b>Frequency</b>
$0 \leq x < 40$	
$40 \leq x < 50$	
$50 \leq x < 60$	
$60 \leq x < 80$	
$80 \leq x < 120$	

6.

The histogram below shows the number of emails sent by 1,000 employees in a month.

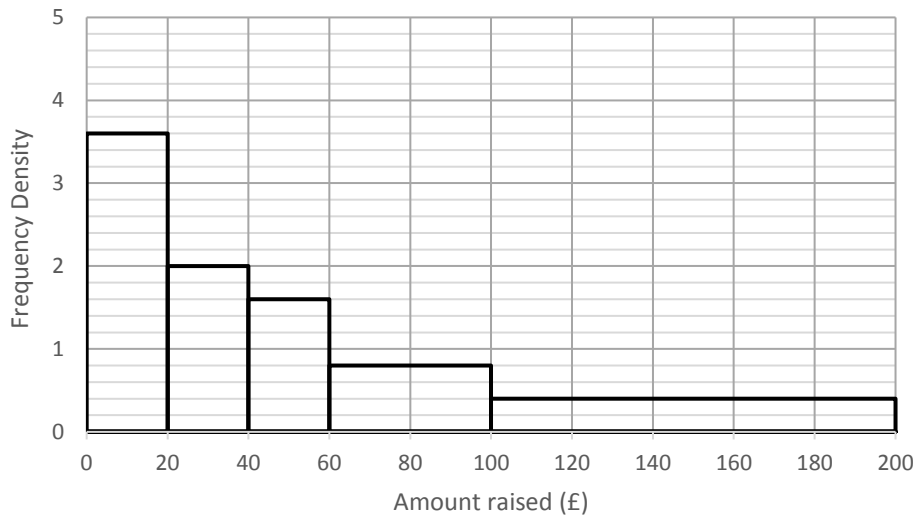


Use the histogram to complete the table below.

<b>Number of emails sent</b>	<b>Frequency</b>
$0 \leq x < 100$	
$100 \leq x < 120$	
$120 \leq x < 140$	
$140 \leq x < 160$	
$160 \leq x < 360$	

7.

The histogram below shows the amount of money raised for charity by 200 participants of a fun run.



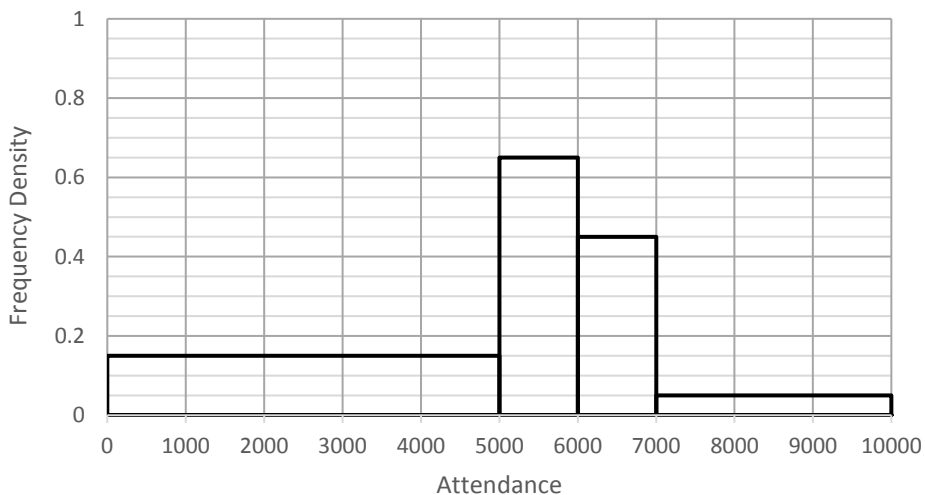
(a) How many participants raised more than £100?

(b) How many participants raised less than £40?

(c) How many participants raised between £20 and £60?

8.

The histogram below shows the attendances at 2,000 cricket matches.

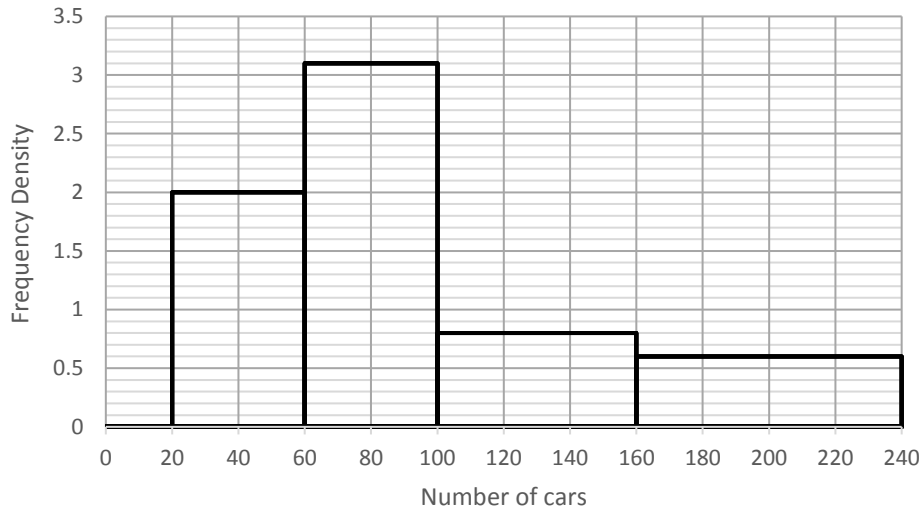


(a) How many matches had an attendance over 7,000?

(b) Estimate how many matches had an attendance over 9,000.

9.

The histogram below shows the number of cars that used a car wash over the last 300 days.

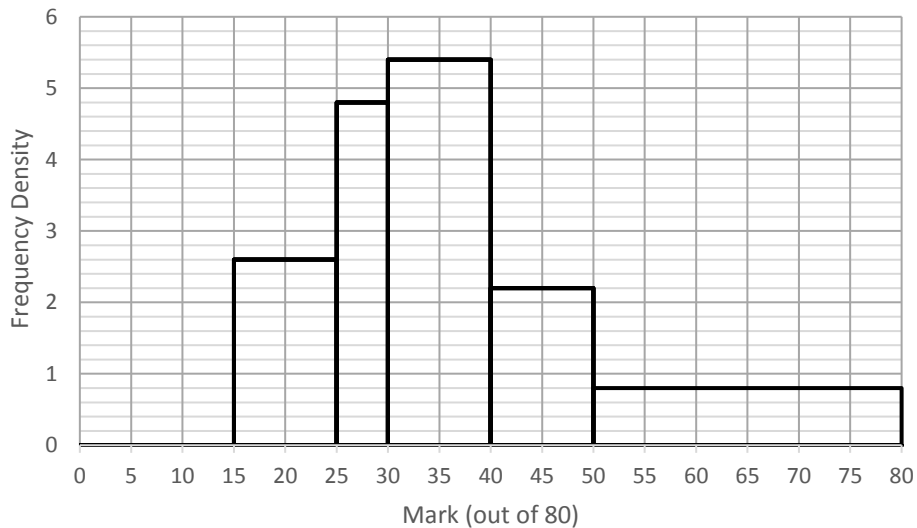


(a) In how many days did fewer than 100 cars use the car wash?

(b) Estimate how many days more than 140 cars used the car wash.

10.

The histogram below shows the marks that 150 students scored in a maths test. There were 80 marks available in the test.



(a) Estimate how many students scored between 45 and 55 marks.

(b) The pass mark for the test was 35 out of 80.

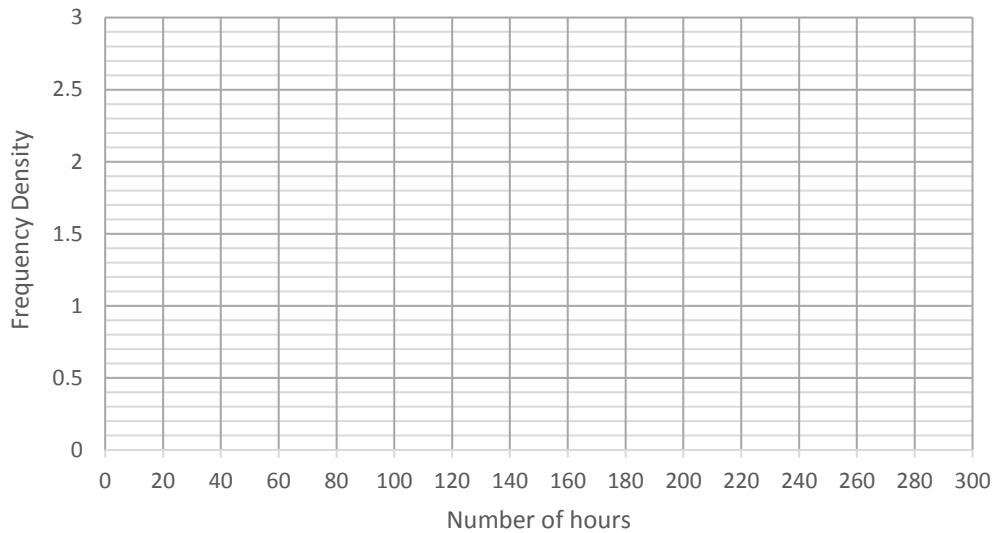
Estimate what percentage of the students passed the exam, to the nearest percent.

11.

The frequency table below shows the number of hours 200 people surveyed spent playing video games last month.

<b>Number of hours</b>	<b>Frequency</b>
$0 \leq x < 20$	52
$20 \leq x < 40$	28
$40 \leq x < 80$	48
$80 \leq x < 120$	36
$120 \leq x < 300$	36

(a) Use the information to plot a histogram on the axis below.



(b) Estimate how many people spent less than 5 hours playing video games.

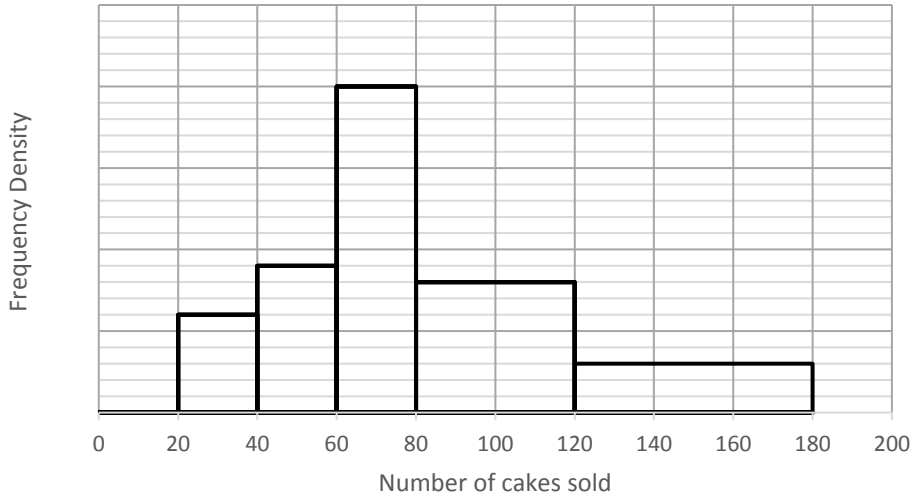
(c) Estimate how many people spent more than 240 hours playing video games.

(d) Estimate how many people spent between 60 and 90 hours playing video games.

(e) Mikey spent 100 hours playing video games last month.

Estimate what percentage of the people surveyed spent more time than Mikey playing video games.

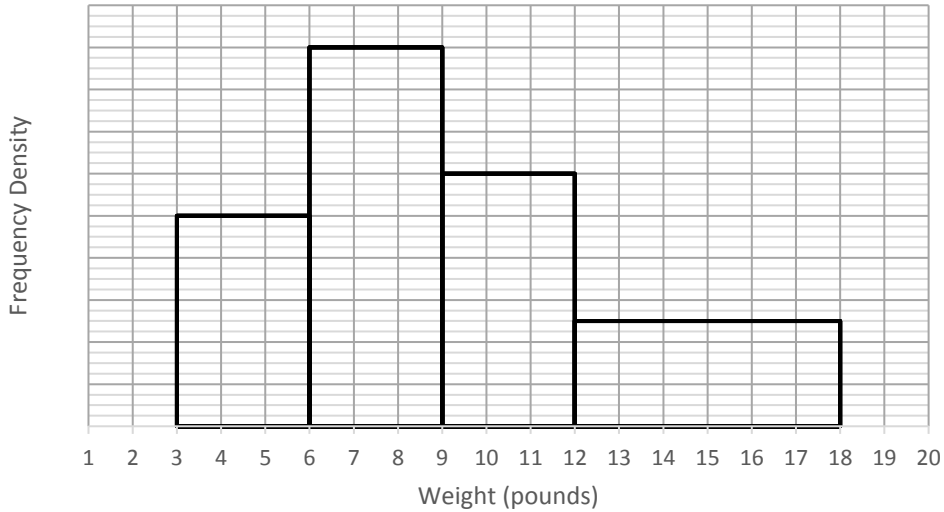
12.  
The histogram below shows the number of cakes sold at a café over the last 120 days.



Use the histogram to complete the table below.

Number of cakes sold	Frequency
$20 \leq x < 40$	12
$40 \leq x < 60$	
$60 \leq x < 80$	
$80 \leq x < 120$	
$120 \leq x < 180$	

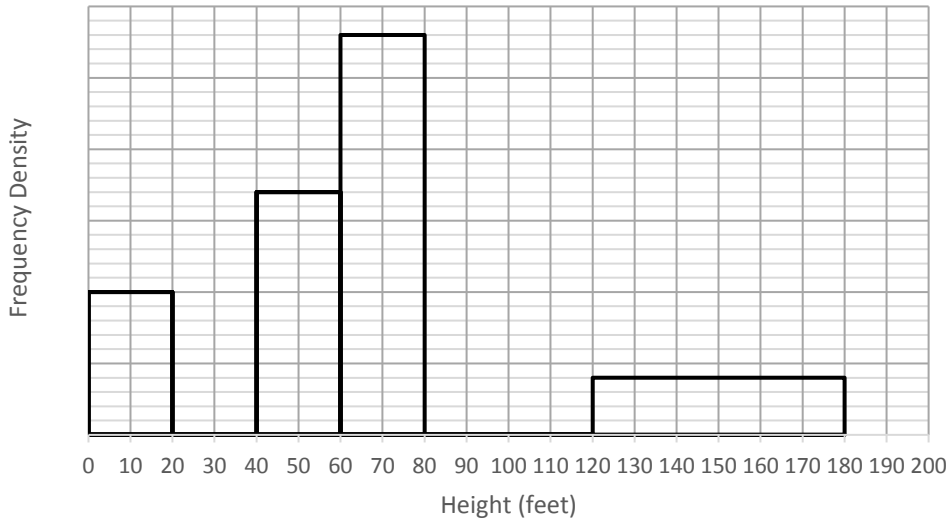
13.  
The histogram below shows the weights (in pounds) of 75 newborn babies.



20% of the babies weighed more than 12 pounds.  
Use the histogram to complete the table below.

Weight (pounds)	Frequency
$3 \leq x < 6$	
$6 \leq x < 9$	
$9 \leq x < 12$	
$12 \leq x < 18$	

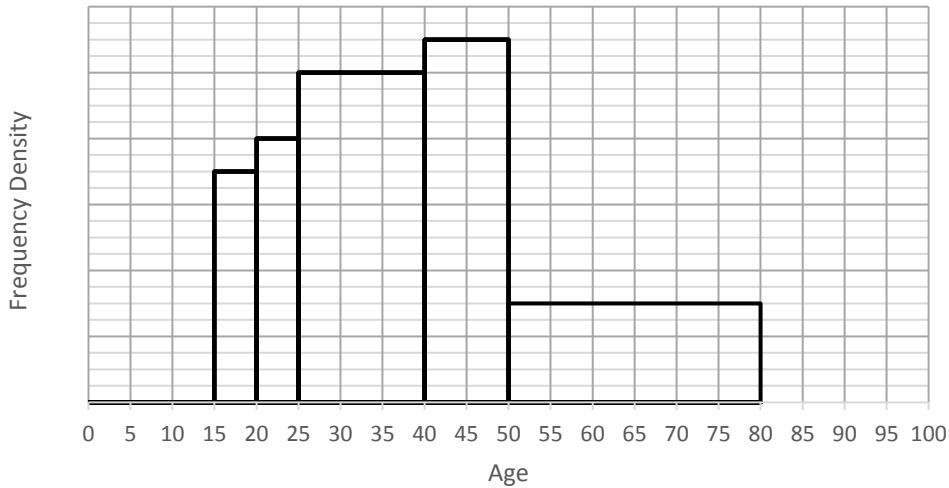
14.  
The incomplete histogram and frequency table below shows the heights (in feet) of 500 coconut trees.



Height (feet)	Frequency
$0 \leq x < 20$	
$20 \leq x < 40$	56
$40 \leq x < 60$	
$60 \leq x < 80$	
$80 \leq x < 120$	176
$120 \leq x < 180$	48

Complete the histogram and the frequency table.

15.  
The incomplete histogram below shows the ages of 10,000 attendees at a football match.

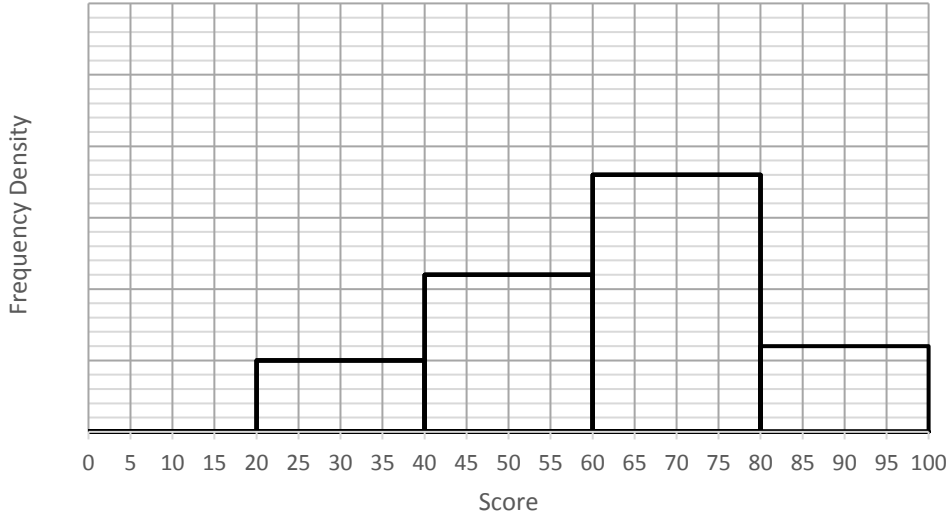


There were 1,500 attendees aged between 5 and 15.  
There were 700 attendees aged between 15 and 20.  
Use the information to complete the histogram.



16.

The histogram below shows the scores that 80 people scored in a game.

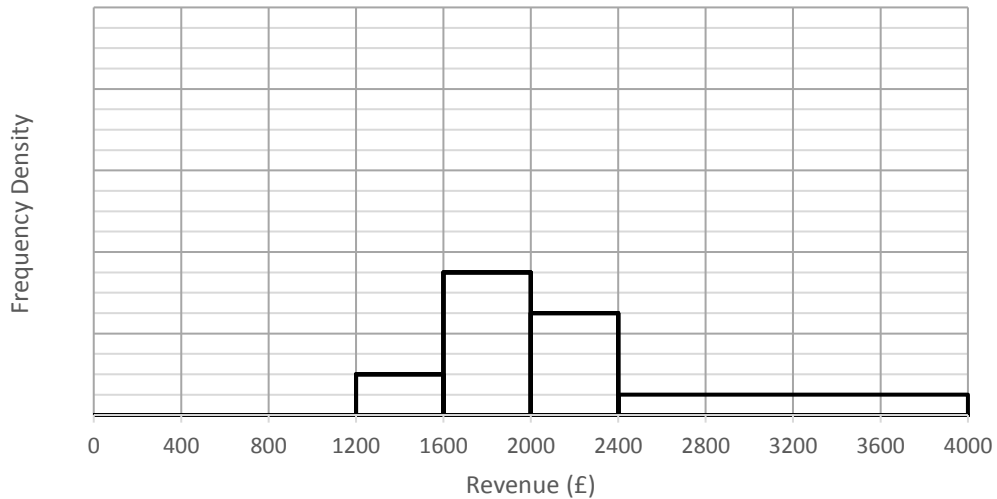


10 people scored between 20 and 40.

How many people scored between 80 and 100?

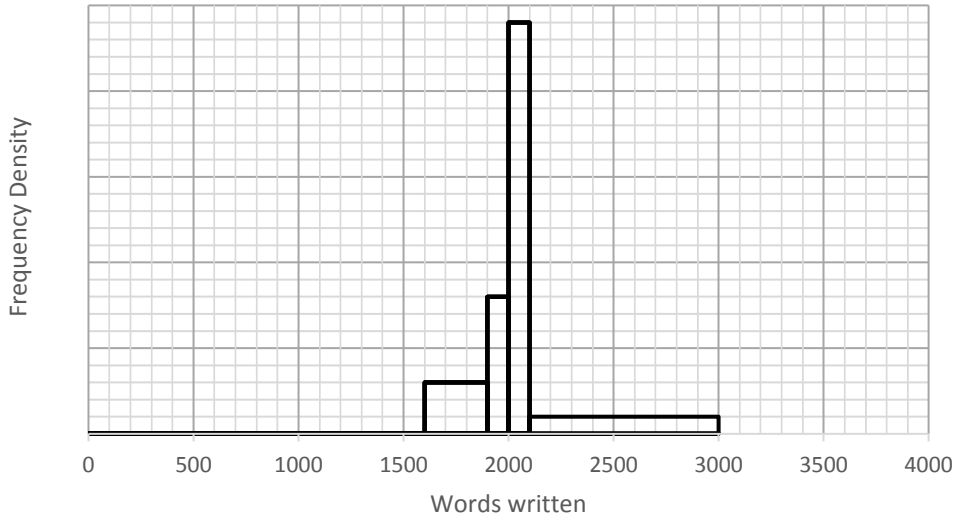
17.

The histogram below shows the daily revenue (in £) of a restaurant over the last 360 days.



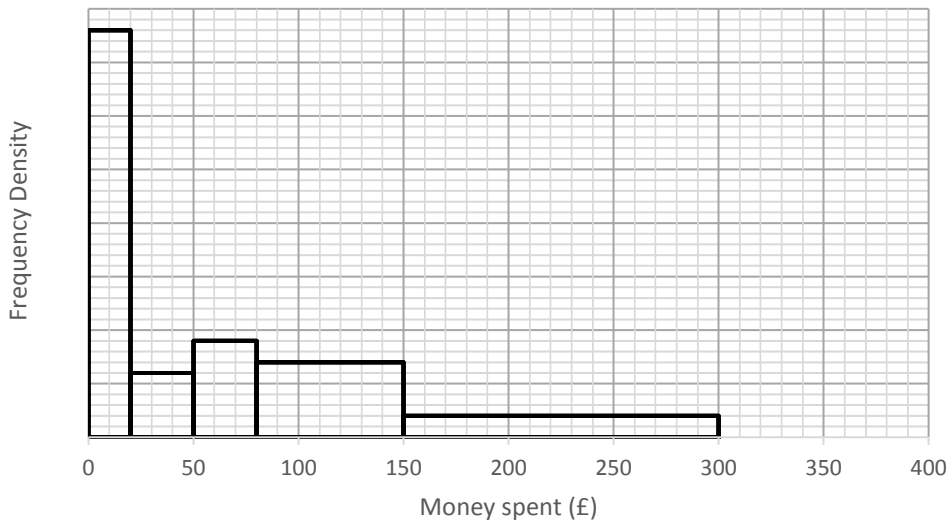
There were 180 days in which the revenue was between £2,000 and £4,000.  
Estimate in how many days the revenue was below £1,500.

18.  
The histogram below shows the number of words that 200 students wrote in an essay.



68 students wrote between 1,600 and 2,000 words.  
Estimate what percentage of the students wrote more than 2,400 words.

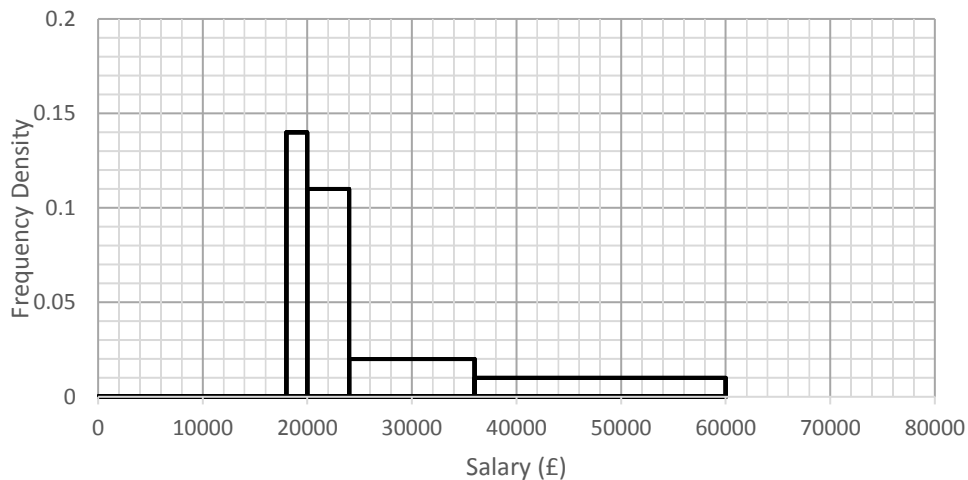
19.  
The histogram below shows the money spent by 2,000 shoppers on a visit to the mall.



450 shoppers spent between £20 and £80.  
Estimate how many shoppers spent more than £200.

20.

The histogram below shows the salaries of the employees at Charlton Electronics.



(a) How many employees work at Charlton Electronics?

The frequency table below shows the salaries of the employees at Mint Technology.

Salary (£)	Frequency
$18,000 \leq x < 22,000$	440
$22,000 \leq x < 26,000$	400
$26,000 \leq x < 30,000$	240
$30,000 \leq x < 70,000$	400

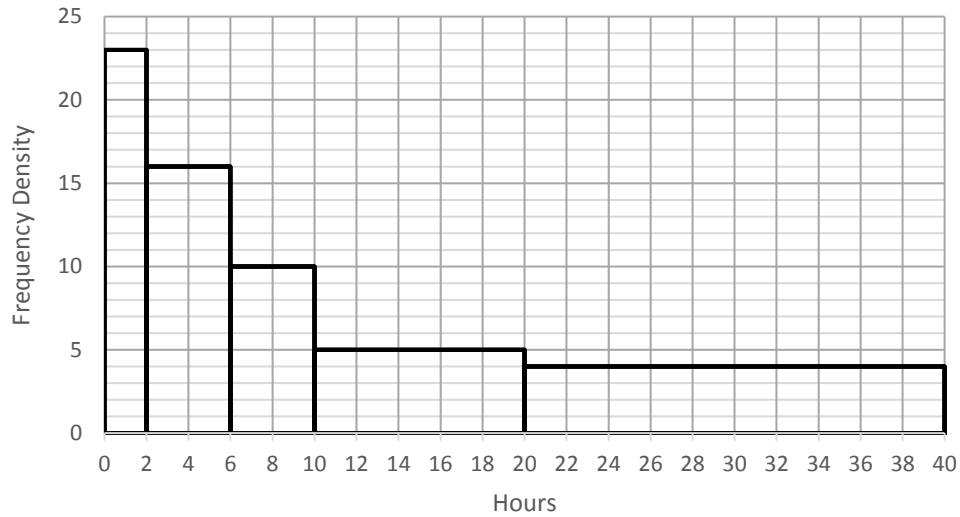
(b) Use the information to plot a histogram for Mint Technology on the axis below.



(c) Matt says “The percentage of employees who earn more than £30,000 is higher at Mint Technology than at Charlton Electronics”.

Do you agree with Matt? Explain your reasoning.

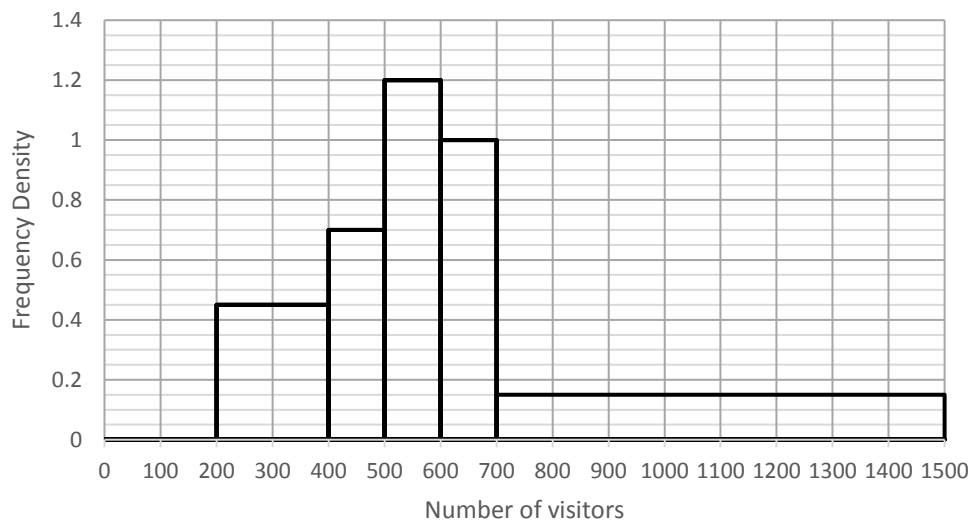
21.  
The histogram below shows how many hours 280 people spent watching TV last week.



(a) Estimate how many people watched between 3 and 8 hours of TV last week.

(b) Estimate the median.

22.  
The histogram below shows the number of visitors to a website over the last 500 days.



(a) Estimate the median.

(b) Estimate the upper quartile.