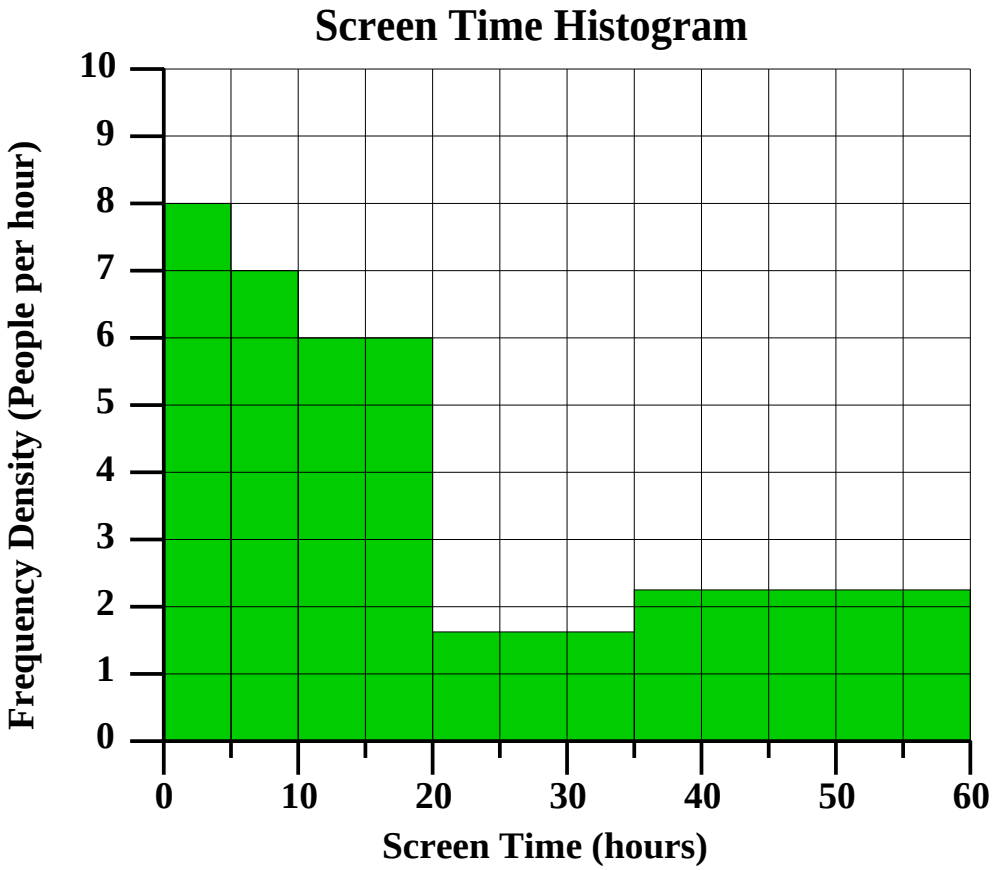
10.6 Answers

10.6.1 Solution to 10.2 Example

(ii)

Screen time (hours)	Frequency (Number of people)	Width (hours)	Height Frequency Density (people per hour)
$0 < h \leqslant 5$	40	5	8
$5 < h \leqslant 10$	35	5	7
$10 < h \leqslant 20$	60	10	6
$20 < h \leqslant 35$	24	15	1.6
$35 < h \leqslant 60$	55	25	2.2

(iii)

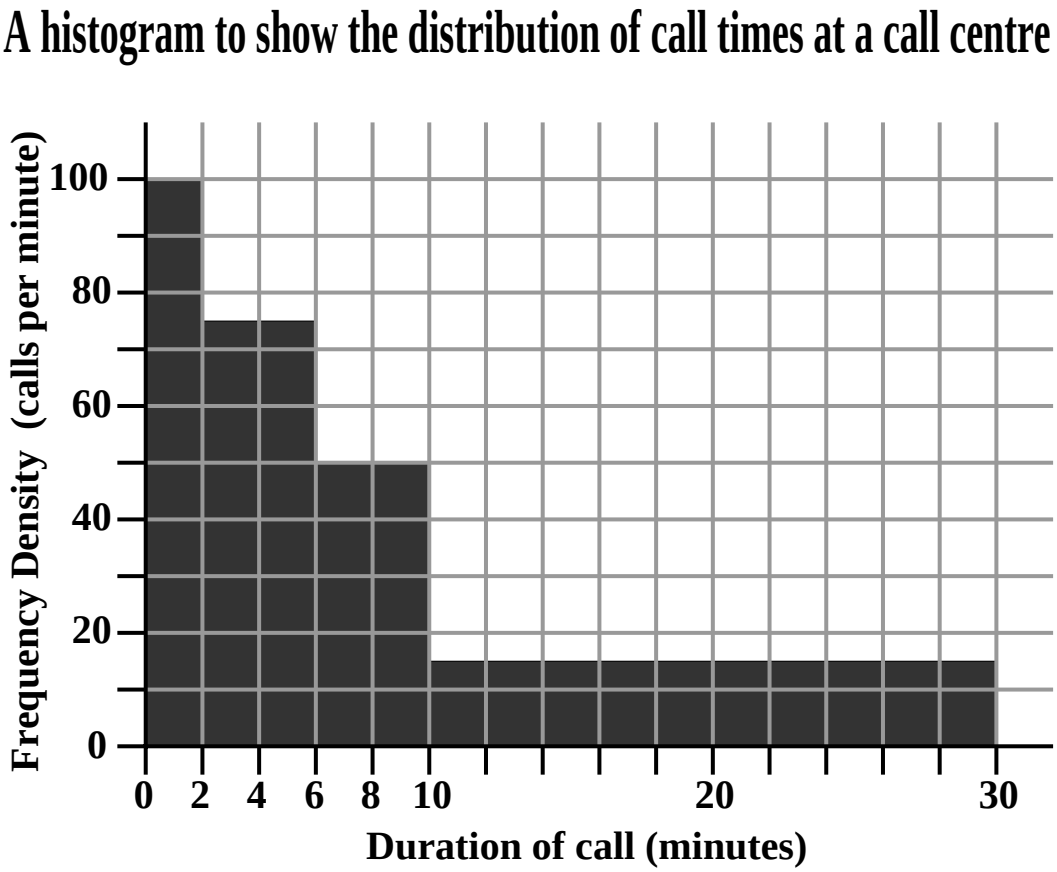


10.6.2 Solutions to 10.5 Exercise

Answer 1

Duration of call (minutes)	Number of calls Frequency = Area	Width	Height
$0 \leqslant t < 2$	200	2	100
$2 \leqslant t < 6$	300	4	75
$6 \leqslant t < 10$	200	4	50
$10 \leqslant t < 30$	300	20	15

[4 marks]



Suitable title **[1 mark]**
An *x*-axis that is numbered, labelled, and with the units clearly stated **[1 mark]**
A *y*-axis that is numbered, labelled, and with the units clearly stated **[1 mark]**
For each bar that is of the correct width and height **[4 x 1 mark]**

Total : 11 marks

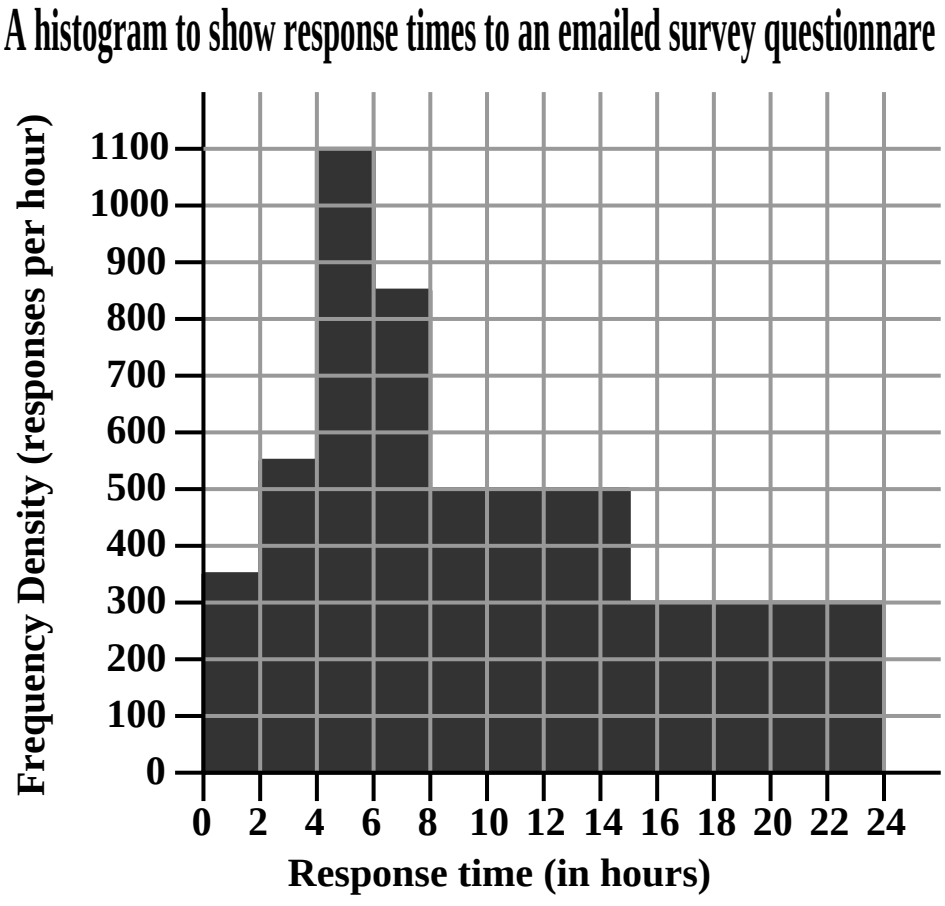
Answer 2

(i) 3100

(ii)

Response time (hours)	Number of questionnaires Frequency = Area	Width	Height
$0 \leqslant h < 2$	700	2	350
$2 \leqslant h < 4$	1100	2	550
$4 \leqslant h < 6$	2200	2	1100
$6 \leqslant h < 8$	1700	2	850
$8 \leqslant h < 15$	3500	7	500
$15 \leqslant h < 24$	2700	9	300

[4 marks]



Suitable title **[1 mark]**

An *x*-axis that is numbered, labelled, and with the units clearly stated **[1 mark]**

A *y*-axis that is numbered, labelled, and with the units clearly stated **[1 mark]**

For each bar that is of the correct width and height. **[6 x 1 mark]**

Total : 13 marks

Answer 3

Car speed (miles per hour, mph)	Number of cars Frequency = Area	Width	Height
$0 \leqslant m < 20$	100	20	5
$20 \leqslant m < 28$	160	8	20
$28 \leqslant m < 32$	400	4	100
$32 \leqslant m < 36$	160	4	40
$36 \leqslant m < 48$	180	12	15
$48 \leqslant m < 56$	40	8	5

(ii) 1040 cars **(iii)** $\frac{400}{1040} \times 100 = 38.5\%$

Answer 4

Bulb lifetime (in hours)	Number of bulbs Frequency	Width	Height
$0 \leqslant t < 100$	50	100	0.5
$100 \leqslant t < 1000$	180	900	0.2
$1000 \leqslant t < 2000$	100	1000	0.1
$2000 \leqslant t < 4000$	500	2000	0.25
$4000 \leqslant t < 4500$	250	500	0.5
$4500 \leqslant t < 4600$	20	100	0.2