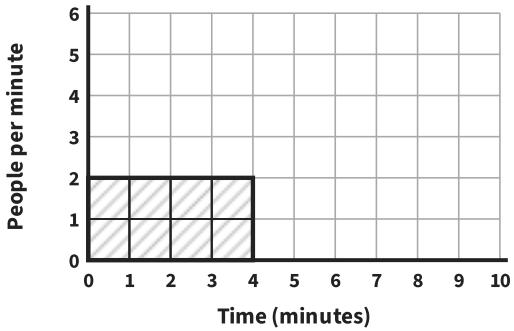
Histograms: Drawing Histograms

1

Each square is one person. Draw each bar from squares, then write how tall it is.

Time (minutes)	Frequency	Height of bar
$0 < t \leq 4$	8	2
$4 < t \leq 6$	10	
$6 < t \leq 7$	4	
$7 < t \leq 10$	9	

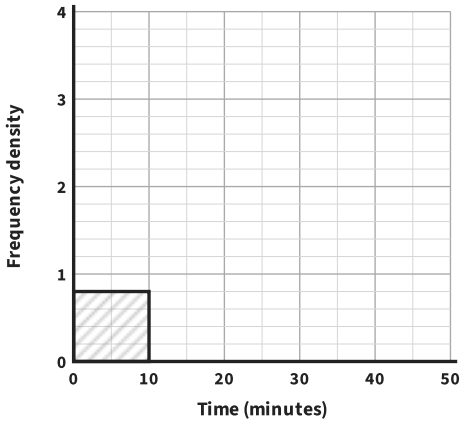


2

frequency density = frequency ÷ class width

Complete the table, then draw the histogram.

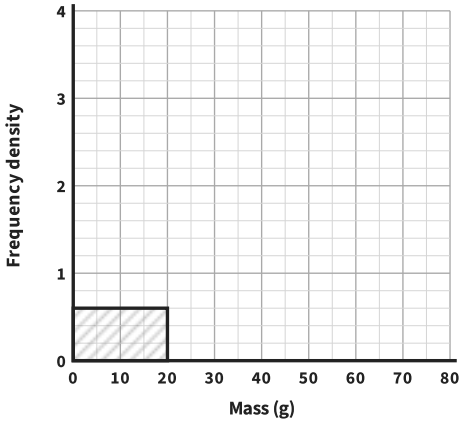
Time (minutes)	Frequency	Class width	Frequency density
$0 < t \leq 10$	8	10	0.8
$10 < t \leq 15$	12		
$15 < t \leq 20$	18		
$20 < t \leq 30$	14		
$30 < t \leq 50$	8		



3

Complete the table, then draw the histogram.

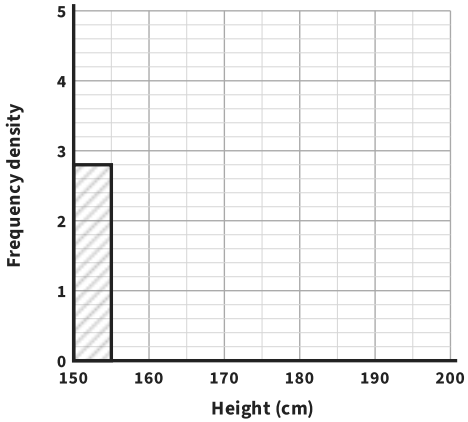
Mass (g)	Frequency	Class width	Frequency density
$0 < m \leq 20$	12	20	0.6
$20 < m \leq 30$	22		
$30 < m \leq 40$	34		
$40 < m \leq 50$	26		
$50 < m \leq 80$	12		



4

Complete the table, then draw the histogram.

Height (cm)	Frequency	Class width	Frequency density
$150 < h \leq 155$	14	5	2.8
$155 < h \leq 160$	22		
$160 < h \leq 170$	30		
$170 < h \leq 180$	16		
$180 < h \leq 200$	12		

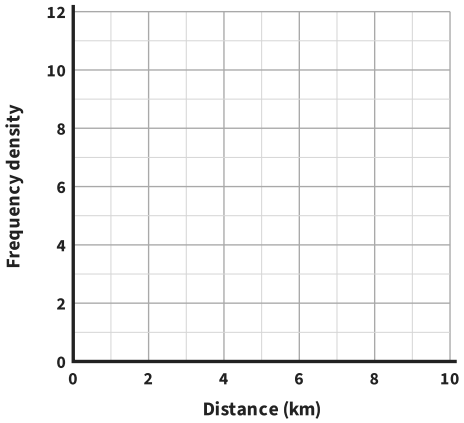


Histograms: Drawing Histograms

5

Complete the table, then draw the histogram.

Distance (km)	Frequency	Class width	Frequency density
$0 < d \leq 2$	**8**		
$2 < d \leq 3$	**9**		
$3 < d \leq 5$	**14**		
$5 < d \leq 6$	**11**		
$6 < d \leq 10$	**8**		

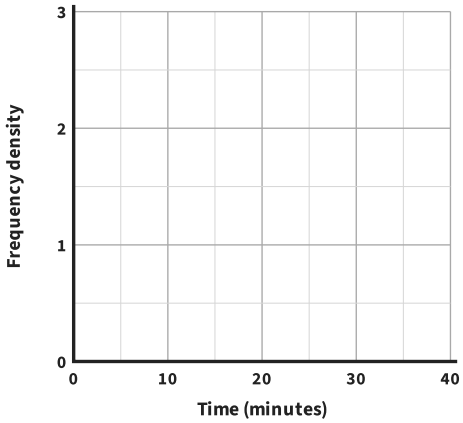


6

Explain what Sam has done wrong. Then draw the histogram properly.

Time (minutes)	Frequency
$0 < t \leq 10$	**15**
$10 < t \leq 20$	**25**
$20 < t \leq 40$	**30**

Sam drew a bar 20 wide and 30 tall for the last class.

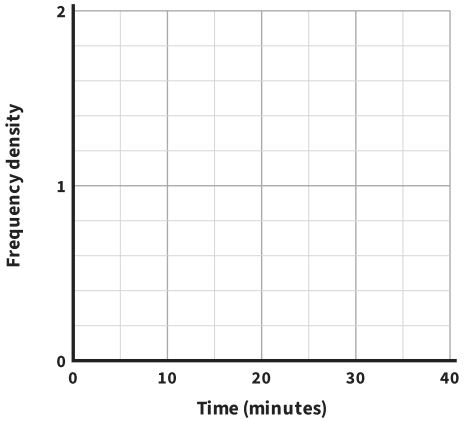


7

Which class has the taller bar? Work it out, then draw both bars.

Time (minutes)	Frequency
$0 < t \leq 10$	**18**
$10 < t \leq 40$	**36**

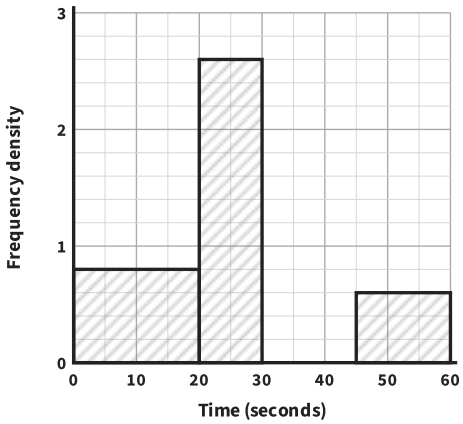
Taller _____



8

Three of the bars are drawn. Draw the bar for $30 < t \leq 45$.

Time (seconds)	Frequency
$0 < t \leq 20$	**16**
$20 < t \leq 30$	**26**
$30 < t \leq 45$	**21**
$45 < t \leq 60$	**9**

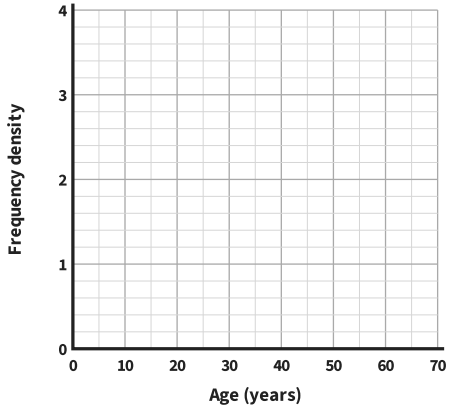


Histograms: Drawing Histograms *further practice*

9

Draw a histogram for the data in the table.

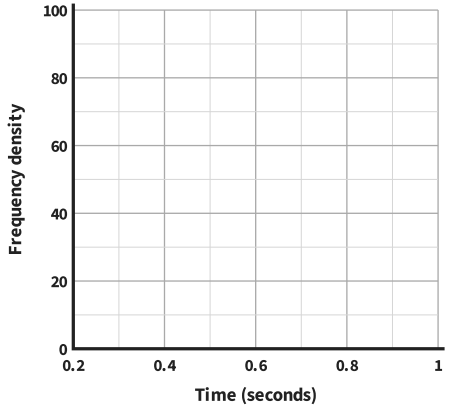
Age (years)	Frequency		
$0 < a \leq 10$	6		
$10 < a \leq 20$	14		
$20 < a \leq 25$	16		
$25 < a \leq 40$	27		
$40 < a \leq 70$	12		



10

The table shows reaction times. Draw a histogram.

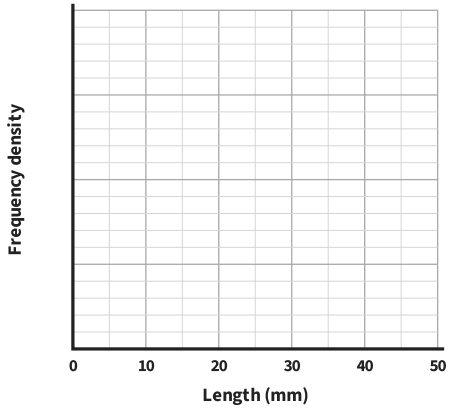
Time (seconds)	Frequency		
$0.2 < t \leq 0.4$	6		
$0.4 < t \leq 0.5$	9		
$0.5 < t \leq 0.6$	7		
$0.6 < t \leq 1$	8		



11

Choose a scale for the frequency density axis, then draw the histogram.

Length (mm)	Frequency		
$0 \leq l < 20$	12		
$20 \leq l < 30$	22		
$30 \leq l < 35$	16		
$35 \leq l < 50$	15		

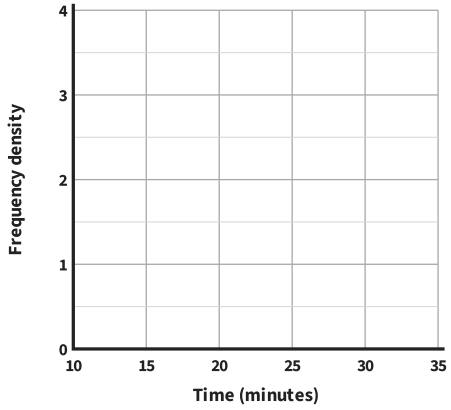


12

Which bar on the histogram is taller, and by how much? Draw both bars.

Thirty runners took between 10 and 20 minutes. Thirty more took between 20 and 35 minutes.

Answer _____



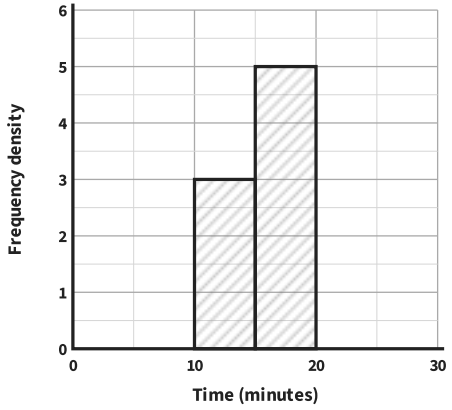
Histograms: Drawing Histograms *further practice*

13

How tall is the new bar? Draw it.

The two bars show 15 and 25 people.
They are joined into one class, $10 < t \leq 20$.

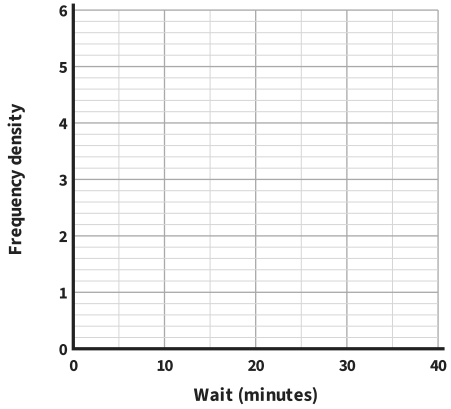
Height _____



14

78 people were asked how long they waited. Find the missing frequency, then draw the histogram.

Wait (minutes)	Frequency	Frequency density
$0 < t \leq 5$	**9**	
$5 < t \leq 10$		
$10 < t \leq 20$	**26**	
$20 < t \leq 40$	**16**	

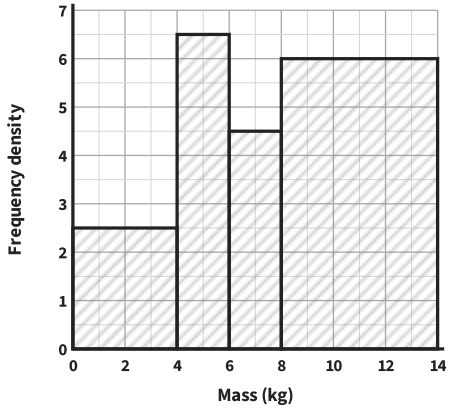


15

One bar is drawn wrong. Which one? Draw it properly.

Mass (kg)	Frequency
$0 < m \leq 4$	**10**
$4 < m \leq 6$	**13**
$6 < m \leq 8$	**9**
$8 < m \leq 14$	**12**

Wrong bar _____



16

Explain why Kim is wrong.

Kim says the class $10 < t \leq 15$ has the most people, because it has the tallest bar.

