Drawing histograms

1

Complete the table.

Time, t (minutes)	Frequency	Class width	Frequency density
$0 < t \leq 10$	20	**10**	**2**
$10 < t \leq 20$	50	**10**	
$20 < t \leq 30$	30		

2

Complete the table.

Mass, m (kg)	Frequency	Class width	Frequency density
$0 < m \leq 5$	15	**5**	
$5 < m \leq 10$	20		
$10 < m \leq 20$	10		

3

Complete the table.

Height, h (cm)	Frequency	Class width	Frequency density
$20 < h \leq 30$	30		
$30 < h \leq 50$	40		
$50 < h \leq 55$	25		

4

Complete the table. Which class is the most crowded?

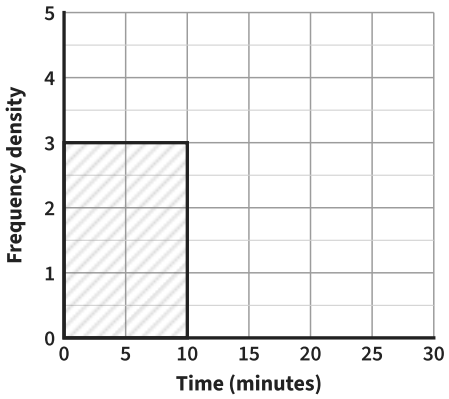
Age, a (years)	Frequency	Class width	Frequency density
$10 < a \leq 12$	8		
$12 < a \leq 16$	12		
$16 < a \leq 20$	20		

Answer _____

5

Draw the histogram.

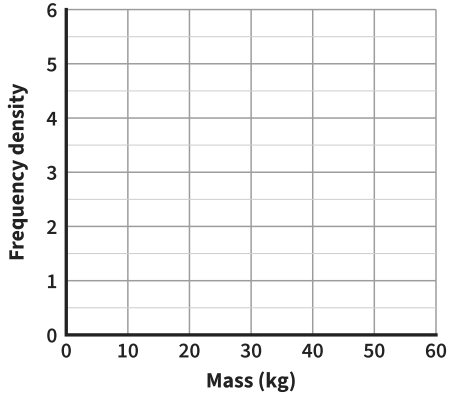
Time, t (minutes)	Frequency	Class width	Frequency density
$0 < t \leq 10$	30	10	3
$10 < t \leq 15$	20	5	4
$15 < t \leq 30$	30	15	2



6

Draw the histogram.

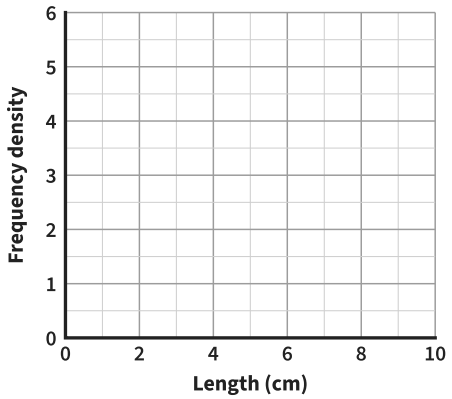
Mass, m (kg)	Frequency	Class width	Frequency density
$0 < m \leq 20$	40	20	2
$20 < m \leq 30$	50	10	5
$30 < m \leq 40$	30	10	3
$40 < m \leq 60$	20	20	1



7

Complete the table. Draw the histogram.

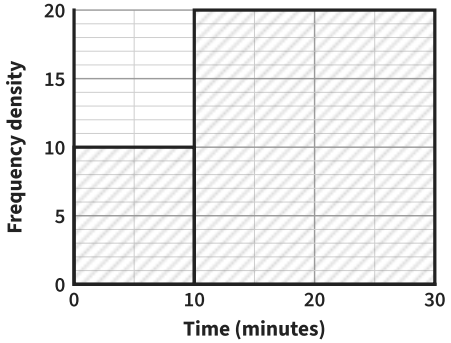
Length, l (cm)	Frequency	Class width	Frequency density
$0 < l \leq 4$	12		
$4 < l \leq 6$	10		
$6 < l \leq 10$	8		



8

Sam draws this histogram.
Explain his mistake.

Time, t (minutes)	Frequency
$0 < t \leq 10$	10
$10 < t \leq 30$	20



Answer _____

Drawing histograms *further practice*

9

The class $10 < t \leq 30$ has a frequency of 30. Work out the frequency density.

Answer _____

10

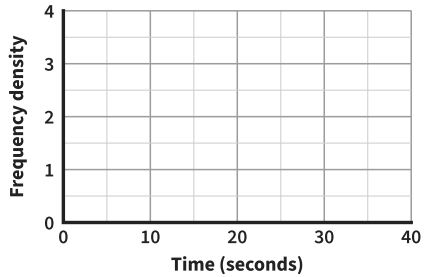
The class $0 < t \leq 4$ has a frequency of 12.
The class $4 < t \leq 12$ has a frequency of 20.
Which bar is taller?

Answer _____

11

Draw the histogram.

Time, t (s)	$0 < t \leq 10$	$10 < t \leq 15$	$15 < t \leq 20$	$20 < t \leq 40$
Frequency	15	20	15	20



Answer _____

12

The class $20 < m \leq 40$ has a frequency of 30. Ella draws its bar 30 tall.
Is she right? Explain.

Answer _____

13

Two classes have the same frequency.
Class A is 10 wide and its bar is 4 tall.
Class B is 5 wide. How tall is its bar?

Answer _____

14

Work out the frequency density of each class.

Height, h (cm)	Frequency
$140 < h \leq 150$	15
$150 < h \leq 155$	20
$155 < h \leq 160$	18
$160 < h \leq 180$	12

Answer _____

15

A histogram has no numbers on its frequency density axis.
The class $10 < t \leq 20$ has a frequency of 25 and its bar is 5 squares tall.
The class $20 < t \leq 40$ has a frequency of 30. How many squares tall is its bar?

Answer _____

16

Why does the height of each bar show frequency density, not frequency?

Answer _____