Histograms with unequal class widths

Grade 6 | Higher | 5 questions, 22 marks

GCSE Statistics topic practice

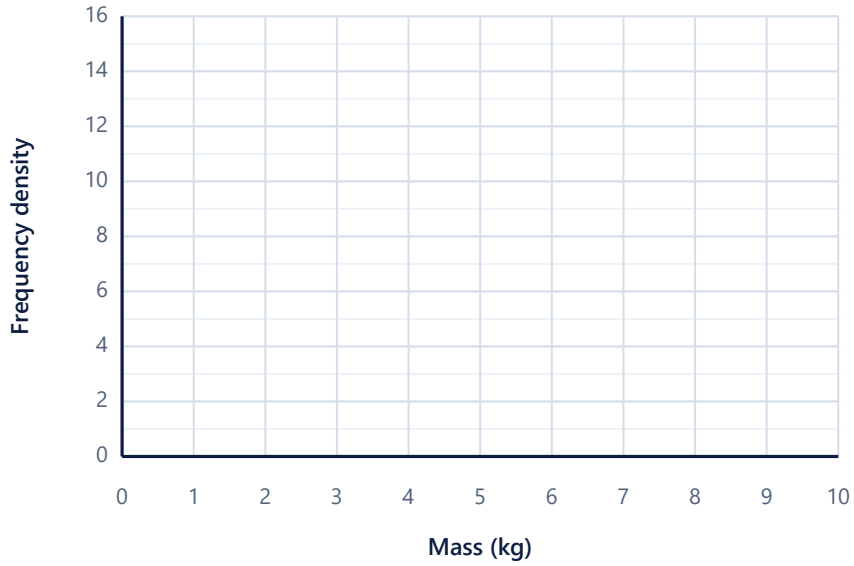
Name: _____ **Date:** _____ **Score:** _____ **/ 22**

1 The table shows the masses, m kg, of the 65 parcels a courier delivered one morning.

Mass, m (kg)	**$0 < m \leq 2$**	**$2 < m \leq 3$**	**$3 < m \leq 4$**	**$4 < m \leq 6$**	**$6 < m \leq 10$**
Frequency	14	12	15	16	8

a. Work out the frequency density for each class. (2)

b. On the grid, draw a histogram for this information. (2)



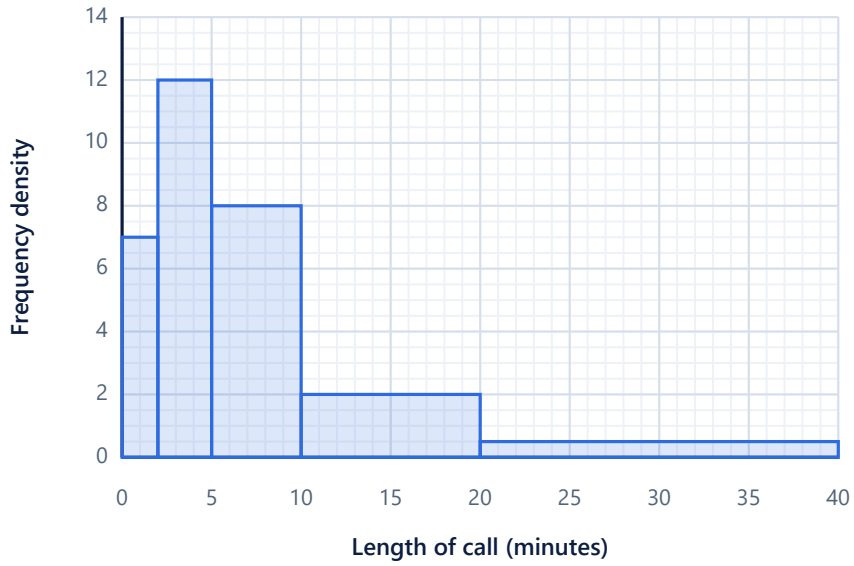
(4 marks)

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2 The histogram shows the lengths, t minutes, of the calls to a council helpline one day.

a. Leo says, "The tallest bar is for calls of between 2 and 5 minutes, so this class has more calls than any other class." Is Leo correct? You must show your working. (2)

b. Work out the total number of calls to the helpline that day. (2)



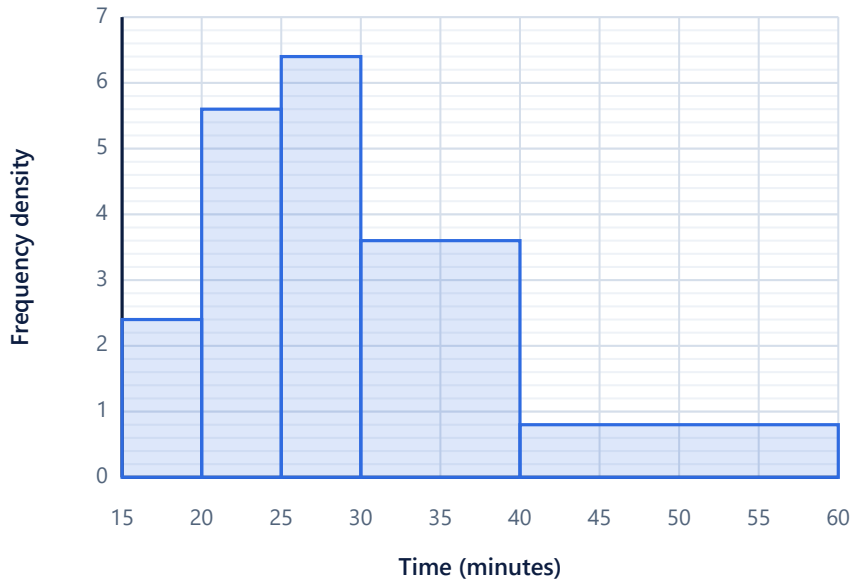
(4 marks)

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3 The histogram shows the times, t minutes, taken by the runners in a 5 km fun run.

a. Work out an estimate for the number of runners who took between 25 minutes and 45 minutes. (3)

b. Explain why your answer to part (a) is only an estimate. (1)



(4 marks)

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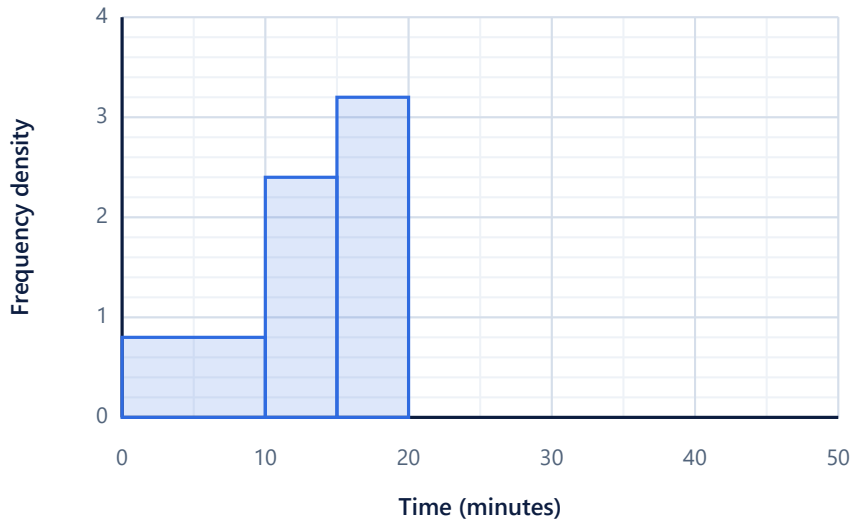
4 The incomplete table and histogram show the time, t minutes, that shoppers spent in a supermarket.

Time, t (min)	**$0 < t \leq 10$**	**$10 < t \leq 15$**	**$15 < t \leq 20$**	**$20 < t \leq 30$**	**$30 < t \leq 50$**
Frequency	8	12		22	12

a. Use the histogram to work out the missing frequency in the table. (1)

b. Complete the histogram. (2)

c. Work out an estimate for the number of shoppers who spent more than 25 minutes in the supermarket. (2)



(5 marks)

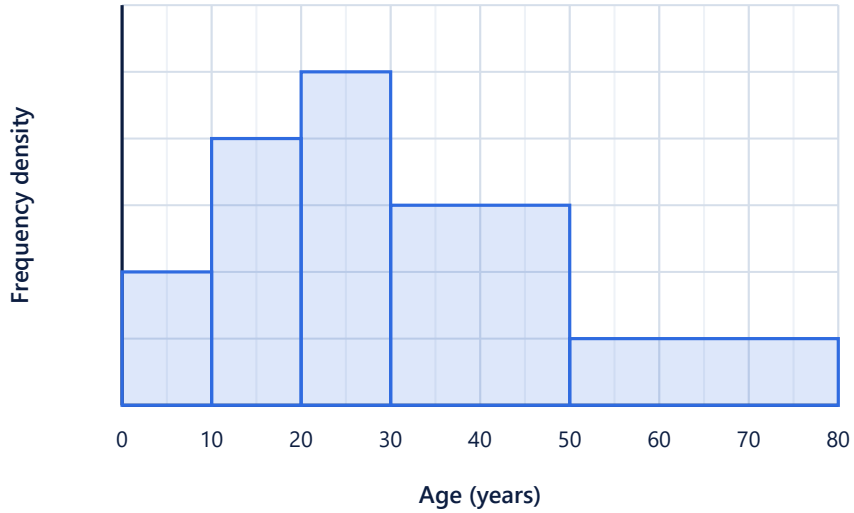
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5 The histogram shows the ages, in years, of the visitors to a museum one Saturday. The frequency density axis has no scale.

There were 60 visitors aged over 10 and up to 20.

a. Work out the number of visitors aged over 30 and up to 50. (2)

b. Work out an estimate for the percentage of the visitors who were aged over 40. (3)



(5 marks)

End of questions | Total 22 marks

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