Histogram problems with missing values

Grade 9 | Higher | 5 questions, 22 marks

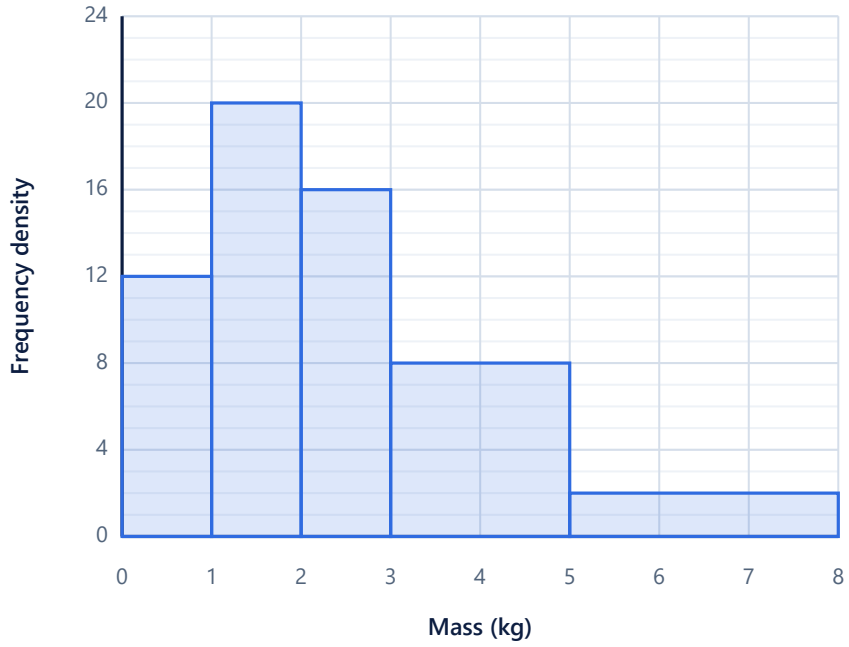
GCSE Statistics topic practice

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

1 The histogram shows information about the masses of the parcels delivered by a courier in one day.

a. Work out the number of parcels with a mass between 3 kg and 5 kg. (1)

b. Work out an estimate for the number of parcels with a mass of more than 3.5 kg. (2)



(3 marks)

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2 The table shows information about the times, t seconds, some people took to solve a puzzle. Lena draws a histogram for this information.

Time (t seconds)	Frequency
$20 < t \leq 30$	15
$30 < t \leq 50$	24
$50 < t \leq 80$	

On Lena's histogram the bar for the class $20 < t \leq 30$ is 6 cm high.

a. Work out the height of the bar for the class $30 < t \leq 50$ (2)

b. The bar for the class $50 < t \leq 80$ is 2 cm high. Work out the frequency for this class. (2)

(4 marks)

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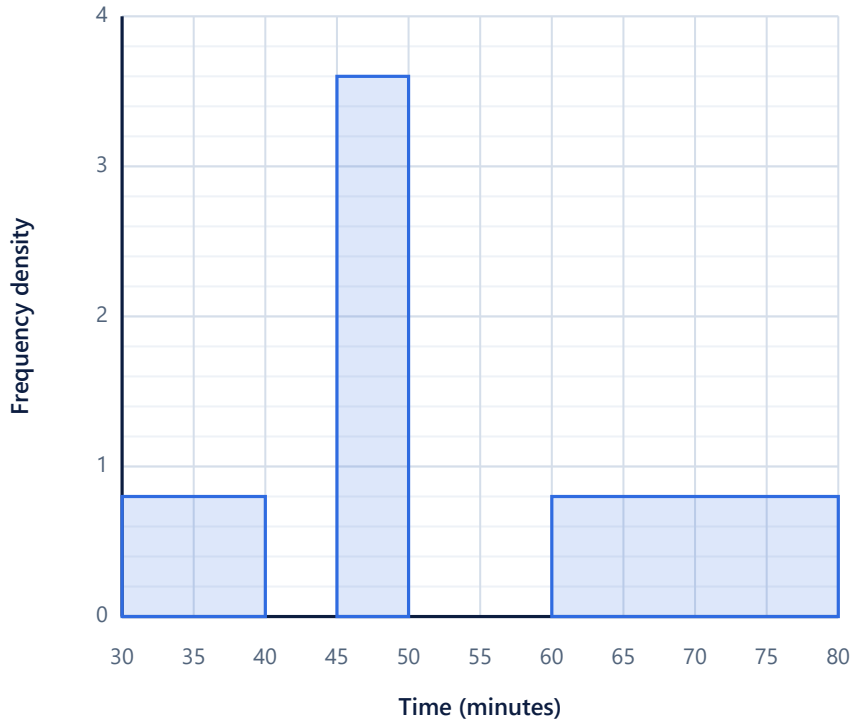
3 The incomplete table and the incomplete histogram show the times, t minutes, that some runners took to finish a 10 km race.

Time (t minutes)	Frequency
$30 < t \leq 40$	8
$40 < t \leq 45$	12
$45 < t \leq 50$	
$50 < t \leq 60$	26
$60 < t \leq 80$	

a. Use the histogram to complete the table. (2)

b. Use the table to complete the histogram. (1)

c. Work out an estimate for the median time. Give your answer correct to 1 decimal place. (2)



(5 marks)

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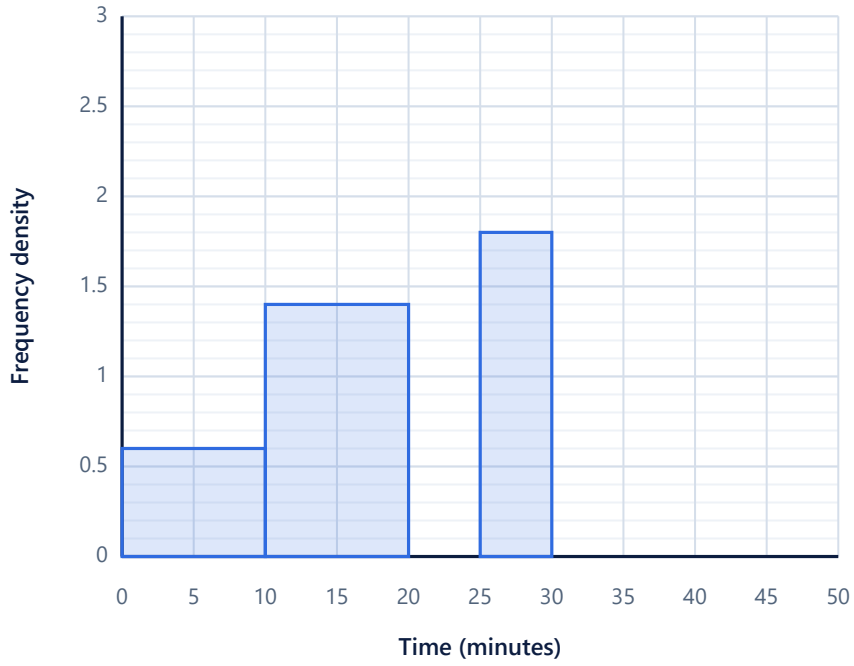
4 50 students were asked how long, t minutes, they spent on their homework one evening. The table and the incomplete histogram show the results.

Time (t minutes)	Frequency
$0 < t \leq 10$	6
$10 < t \leq 20$	14
$20 < t \leq 25$	x
$25 < t \leq 30$	9
$30 < t \leq 50$	8

a. Work out the value of x. (1)

b. Complete the histogram. (2)

c. Work out an estimate for the percentage of the students who spent more than 28 minutes on their homework. (2)



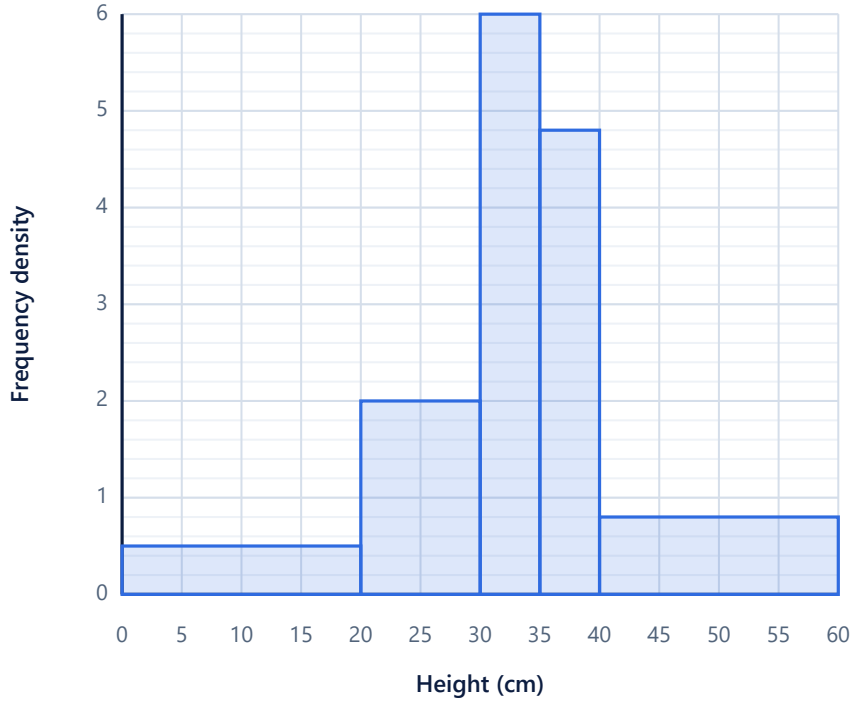
(5 marks)

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5 The histogram shows information about the heights, h cm, of the tomato plants in a greenhouse.

a. Show that there are 100 tomato plants in the greenhouse. (2)

b. 25% of the tomato plants are taller than k cm. Work out an estimate for the value of k. Give your answer correct to 1 decimal place. (3)



(5 marks)

End of questions | Total 22 marks

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