**Histograms**

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| **(a)** | **(b)** |
| The distance travelled to work by 50 employees is recorded in a grouped frequency table.(a) Calculate the frequency density for each class.

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| --- | --- | --- | --- |
| Distance (km) | Frequency |  |  |
| $$0<d\leq 5$$ | 12 |  |  |
| $$5<h\leq 10$$ | 16 |  |  |
| $$10<h\leq 20$$ | 10 |  |  |
| $$20<h\leq 30$$ | 7 |  |  |
| $$30<h\leq 50$$ | 5 |  |  |

(b) Plot a histogram.(c) Use your histogram to estimate the number of people who travel at least 12 km to work. | The house prices of 100 houses in a village are recorded in a grouped frequency table.(a) Use the information in the table to calculate frequency densities and plot a histogram.(b) Use your histogram to estimate the percentage of houses that cost less than $£270 000$. |

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| --- | --- |
| House Price ($£ thousands)$ | Frequency |
| $$0<p\leq 100$$ | 6 |
| $$100<p\leq 200$$ | 22 |
| $$200<p\leq 250$$ | 18 |
| $$250<p\leq 300$$ | 35 |
| $$300<p\leq 500$$ | 15 |
| $$500<p\leq 1000$$ | 4 |

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| **(c)** |
| The time taken, in minutes, by 50 students to solve a maths puzzle is recorded in a grouped frequency table.(a) Plot a histogram to represent this data.(b) Use your histogram to find the median time taken. |

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| --- | --- |
| Time Taken (minutes$)$ | Frequency |
| $$0<t\leq 2$$ | 4 |
| $$2<t\leq 4$$ | 7 |
| $$4<t\leq 5$$ | 10 |
| $$5<t\leq 6$$ | 12 |
| $$6<t\leq 7$$ | 11 |
| $$7<t\leq 12$$ | 6 |

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