**Histograms**

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| Name : | Class : | Date : |

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| Mark : | /7 | % |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1)** The table below shows the heights of 20 people.Complete the table to show the frequency densities, rounding your answer to 1 decimal place.

|  |  |  |
| --- | --- | --- |
| Height | Frequency | Frequency Density |
| 140  $\leq $ h  $<$ 145 | 4 |  |
| 145  $\leq $ h  $<$ 160 | 9 |  |
| 160  $\leq $ h  $<$ 170 | 13 |  |
| 170  $\leq $ h  $<$ 180 | 1 |  |

      | [1]   |
| **2)** The histogram below shows the distribution of heights (cm) of 900 people.Complete the table to show the frequency density and frequency for each class.

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|   |
| http://www.mathster.com/course/simgs/126283307128_1.png |   |   |
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|  |  |  |
| --- | --- | --- |
| Height | Frequency Density | Frequency |
| 140  $\leq $ h  $<$ 150 |  |  |
| 150  $\leq $ h  $<$ 165 |  |  |
| 165  $\leq $ h  $<$ 170 |  |  |
| 170  $\leq $ h  $<$ 180 |  |  |

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      | [1]   |
| **3)** The histogram below shows the distribution of heights (m) of 900 trees in metres.Complete the table to show the frequency for each class.

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|  |
| http://www.mathster.com/course/simgs/126283307128_2.png |   |   |
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| --- | --- |
| Height | Frequency |
| 140  $\leq $ h  $<$ 150 |  |
| 150  $\leq $ h  $<$ 165 |  |
| 165  $\leq $ h  $<$ 170 |  |
| 170  $\leq $ h  $<$ 180 |  |

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      | [1]   |
| **4)** The table below shows the height, in metres, of 1000 trees.Use the table to fill in the missing bar in the histogram.

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|  |
| http://www.mathster.com/course/simgs/126283307128_3.png |   |   |
|   |

|  |  |
| --- | --- |
| Height | Frequency |
| 0  $\leq $ h  $<$ 10 | 257 |
| 10  $\leq $ h  $<$ 25 | 377 |
| 25  $\leq $ h  $<$ 30 | 131 |
| 30  $\leq $ h  $<$ 40 | 235 |

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      | [1]   |
| **5)** The table below shows the heights of 900 people. Calculate the frequency densities for each class and construct a histogram.

|  |  |  |
| --- | --- | --- |
| Height | Frequency | Frequency Density |
| 140  $\leq $ h  $<$ 145 | 114 |  |
| 145  $\leq $ h  $<$ 155 | 246 |  |
| 155  $\leq $ h  $<$ 165 | 208 |  |
| 165  $\leq $ h  $<$ 180 | 332 |  |

      | [1]   |
| **6)** The histogram below shows the distribution of heights (cm) of 1000 people.Complete the table to show the frequency for each class.

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| --- |
|  |
| http://www.mathster.com/course/simgs/126283307128_4.png |   |   |
|   |

|  |  |
| --- | --- |
| Height | Frequency |
| 140  $\leq $ h  $<$ 145 |  |
| 145  $\leq $ h  $<$ 160 |  |
| 160  $\leq $ h  $<$ 170 |  |
| 170  $\leq $ h  $<$ 180 |  |

 |

      | [1]   |
| **7)** The incomplete table and histogram give some information about heights (cm) of 900 people.Use the information in the histogram to complete the table and hence find the value of the frequency density for the missing bar in the histogram.

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|  |
| http://www.mathster.com/course/simgs/126283307128_5.png |   |   |
|   |

|  |  |
| --- | --- |
| Height | Frequency |
| 140  $\leq $ h  $<$ 145 | 155 |
| 145  $\leq $ h  $<$ 160 | 225 |
| 160  $\leq $ h  $<$ 170 |  |
| 170  $\leq $ h  $<$ 180 |  |

 |

      | [1]   |

**Solutions for the assessment Histograms**

|  |  |
| --- | --- |
| **1)** 0.8,0.6,1.3,0.1 | **2)** fd: 22,25,20,20frequency: 224,375,98,203 |
| **3)** 252,346,102,200 |  |
| **4)** http://www.mathster.com/course/simgs/126283307128_6.png |
| **5)** 22.8,24.6,20.8,22.1http://www.mathster.com/course/simgs/126283307128_7.png |
| **6)** 124,392,235,249 |  |
| **7)** Tables values are: 250, 270Frequency density of missing bar is 31http://www.mathster.com/course/simgs/126283307128_8.png |