**Averages from Grouped Frequency Tables Exam Questions**

**1.** Zach has 10 CDs.  
The table gives some information about the number of tracks on each CD.

|  |  |  |
| --- | --- | --- |
| **Number of tracks** | **Frequency** |  |
| 11 | 1 |  |
| 12 | 3 |  |
| 13 | 0 |  |
| 14 | 2 |  |
| 15 | 4 |  |

(a) Write down the mode.

..............................

(1)

(b) Work out the mean.

..............................

(3)

(Total 4 marks)

**2.** 30 adults took part in a survey.  
They were each asked how much money they spent on lottery tickets last week.  
The table shows the results of the survey.

|  |  |  |
| --- | --- | --- |
| **Money (£)** | **Frequency** |  |
| 0 | 5 |  |
| 2 | 16 |  |
| 4 | 6 |  |
| 20 | 2 |  |
| 30 | 1 |  |

Work out the mean amount of money the 30 adults spent on lottery tickets.

£ ......................................

(Total 3 marks)

**3.** Josh asked 30 adults how many cups of coffee they each drank yesterday.

The table shows his results.

|  |  |  |
| --- | --- | --- |
| **Number of cups** | **Frequency** |  |
| 0 | 5 |  |
| 1 | 9 |  |
| 2 | 7 |  |
| 3 | 4 |  |
| 4 | 3 |  |
| 5 | 2 |  |

Work out the mean.

.....................................

(Total 3 marks)

**4.** Majid carried out a survey of the number of school dinners 32 students had in one week.

The table shows this information.

|  |  |  |
| --- | --- | --- |
| **Number of school dinners** | **Frequency** |  |
| 0 | 0 |  |
| 1 | 8 |  |
| 2 | 12 |  |
| 3 | 6 |  |
| 4 | 4 |  |
| 5 | 2 |  |

Calculate the mean.

.....................................

(Total 3 marks)

**5.** Fred did a survey on the areas of pictures in a newspaper.  
The table gives information about the areas.

|  |  |
| --- | --- |
| Area (A cm2) | Frequency |
| 0 < *A* ≤ 10 | 38 |
| 10 < *A* ≤ 25 | 36 |
| 25 < *A* ≤ 40 | 30 |
| 40 < *A* ≤ 60 | 46 |

Work out an estimate for the mean area of a picture.

.................................cm2

(Total 4 marks)

**6.** The table gives some information about the time taken by a group of 100 students to complete an IQ test.

|  |  |  |
| --- | --- | --- |
| **Time (*t* seconds)** | **Frequency** |  |
| 60 < *t* < 70 | 12 |  |
| 70 < *t* < 80 | 22 |  |
| 80 < *t* < 90 | 23 |  |
| 90 < *t* < 100 | 24 |  |
| 100 < *t* < 110 | 19 |  |

(a) Write down the modal class interval.

.....................................................

(1)

(b) Calculate an estimate for the mean time taken by the students.

................... seconds

(4)

(Total 5 marks)

**7.** The table gives some information about the time taken by a group of 100 students to complete an IQ test.

|  |  |  |
| --- | --- | --- |
| **Time (*t* seconds)** | **Frequency** |  |
| 60 < *t* ≤ 70 | 12 |  |
| 70 < *t* ≤ 80 | 22 |  |
| 80 < *t* ≤ 90 | 23 |  |
| 90 < *t* ≤ 100 | 24 |  |
| 100 < *t* ≤ 110 | 19 |  |

Calculate an estimate for the mean time taken by the students.

.................. seconds

(Total 4 marks)

**8.** The table gives information about the times, in minutes, that 106 shoppers spent in a supermarket.

|  |  |  |
| --- | --- | --- |
| **Time (*t* minutes)** | **Frequency** |  |
| 0 < *t* ≤ 10 | 20 |  |
| 10 < *t* ≤ 20 | 17 |  |
| 20 < *t* ≤ 30 | 12 |  |
| 30 < *t* ≤ 40 | 32 |  |
| 40 < *t* ≤ 50 | 25 |  |

(a) Find the class interval that contains the median.

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(1)

(b) Calculate an estimate for the mean time that the shoppers spent in the supermarket.  
Give your answer correct to 3 significant figures.

...................................... minutes

(4)

(Total 5 marks)