**1** The table shows information about the heights, in cm, of 48 sunflowers in a garden centre.

| Height of sunflower ($h$ cm) | Frequency |
|---|---|
| $90 < h \leqslant 100$ | 8 |
| $100 < h \leqslant 110$ | 12 |
| $110 < h \leqslant 120$ | 15 |
| $120 < h \leqslant 130$ | 10 |
| $130 < h \leqslant 140$ | 3 |

Work out an estimate for the mean height of the sunflowers.

.....cm

**(Total for Question 1 is 4 marks)**

**2** The table shows information about the weights, in kg, of 40 parcels.

| **Weight of parcel ($p$ kg)** | **Frequency** |
|---|---|
| $0 < p \leqslant 1$ | 19 |
| $1 < p \leqslant 2$ | 12 |
| $2 < p \leqslant 3$ | 5 |
| $3 < p \leqslant 4$ | 2 |
| $4 < p \leqslant 5$ | 2 |

(a) Write down the modal class.

.....

**(1)**

(b) Work out an estimate for the mean weight of the parcels.

..... kg

**(4)**

**(Total for Question 2 is 5 marks)**

**3** The table gives information about the number of days that 100 cars were in an airport car park.

| Number of days ($d$) | Frequency |
|---|---|
| $0 < d \leqslant 4$ | 16 |
| $4 < d \leqslant 8$ | 18 |
| $8 < d \leqslant 12$ | 19 |
| $12 < d \leqslant 16$ | 27 |
| $16 < d \leqslant 20$ | 20 |

(a) Write down the modal class.

**(1)**

(b) Work out an estimate for the mean number of days.

days

**(4)**

**(Total for Question 3 is 5 marks)**

**4** The table shows information about the lengths of time, in minutes, 120 customers spent in a supermarket.

| Length of time ($L$ minutes) | Frequency |
|---|---|
| $20 < L \leqslant 30$ | 6 |
| $30 < L \leqslant 40$ | 26 |
| $40 < L \leqslant 50$ | 31 |
| $50 < L \leqslant 60$ | 40 |
| $60 < L \leqslant 70$ | 17 |

(a) Write down the modal class.

.....

**(1)**

(b) Work out an estimate for the mean length of time spent by the 120 customers in the supermarket.

.....minutes

**(4)**

**(Total for Question 4 is 5 marks)**

**5** The table gives information about the amounts of money, in euros, that 70 of Anjali's friends spent last Saturday.

| Money spent ($S$ euros) | Frequency |
|---|---|
| $0 < S \leqslant 8$ | 6 |
| $8 < S \leqslant 16$ | 14 |
| $16 < S \leqslant 24$ | 19 |
| $24 < S \leqslant 32$ | 25 |
| $32 < S \leqslant 40$ | 6 |

One of Anjali's 70 friends is going to be chosen at random.

(a) Find the probability that this friend spent more than 24 euros last Saturday.

.....

**(1)**

(b) Work out an estimate for the mean amount of money spent by Anjali's friends last Saturday. Give your answer correct to 2 decimal places.

..... euros

**(4)**

**(Total for Question 5 is 5 marks)**

**6** The table gives information about the speeds, in kilometres per hour, of 80 motorbikes as each pass under a bridge.

| **Speed ($s$ kilometres per hour)** | **Frequency** |
|---|---|
| $40 < s \leqslant 50$ | 10 |
| $50 < s \leqslant 60$ | 16 |
| $60 < s \leqslant 70$ | 19 |
| $70 < s \leqslant 80$ | 23 |
| $80 < s \leqslant 90$ | 12 |

(a) Write down the modal class.

.....

**(1)**

(b) Work out an estimate for the mean speed of the motorbikes as they pass under the bridge. Give your answer correct to 3 significant figures.

..... kilometres per hour

**(4)**

**(Total for Question 6 is 5 marks)**

**7** The table gives information about the amount of money, in £, that Fiona spent in a grocery store each week during 2019

| Amount spent (£$x$) | Frequency |
|---|---|
| $0 \leqslant x < 20$ | 5 |
| $20 \leqslant x < 40$ | 11 |
| $40 \leqslant x < 60$ | 8 |
| $60 \leqslant x < 80$ | 19 |
| $80 \leqslant x < 100$ | 9 |

Work out an estimate for the total amount of money that Fiona spent in the grocery store during 2019

£.....

**(Total for Question 7 is 3 marks)**

**8** The table gives information about the times, in hours, some students spent doing sport one week.

| Time ($T$ hours) | Frequency |
|---|---|
| $0 < T \leqslant 2$ | 5 |
| $2 < T \leqslant 4$ | 9 |
| $4 < T \leqslant 6$ | 24 |
| $6 < T \leqslant 8$ | 40 |
| $8 < T \leqslant 10$ | 7 |

Calculate an estimate for the mean time these students spent doing sport.
Give your answer in hours, correct to 1 decimal place.

..... hours

**(Total for Question 8 is 4 marks)**

**9** The table gives information about the length of time, in minutes, that each of 60 students took to travel to school on Monday.

| **Length of time ($t$ minutes)** | **Frequency** |
|---|---|
| $0 < t \leqslant 10$ | 4 |
| $10 < t \leqslant 20$ | 10 |
| $20 < t \leqslant 30$ | 15 |
| $30 < t \leqslant 40$ | 25 |
| $40 < t \leqslant 50$ | 6 |

(a) Write down the modal class interval.

.....

**(1)**

(b) Work out an estimate for the mean length of time taken by these 60 students to travel to school on Monday.
Give your answer correct to one decimal place.

..... minutes

**(4)**

**(Total for Question 9 is 5 marks)**

**10** The table shows information about the weights, in kilograms, of 40 babies.

| Weight ($w$ kg) | Frequency |
|---|---|
| $2 < w \leqslant 3$ | 12 |
| $3 < w \leqslant 4$ | 16 |
| $4 < w \leqslant 5$ | 9 |
| $5 < w \leqslant 6$ | 2 |
| $6 < w \leqslant 7$ | 1 |

(a) Write down the modal class.

.....

**(1)**

(b) Work out an estimate for the mean weight of the 40 babies.

..... kg

**(4)**

One of the 40 babies is going to be chosen at random.

(c) Find the probability that this baby has a weight of more than 5 kg.

.....

**(2)**

**(Total for Question 10 is 7 marks)**

**11** A mathematics teacher at a school asked a group of students how far, in kilometres, each student had travelled to get to school that day.

The table gives information about their answers.

| **Distance travelled ($d$ km)** | **Number of students** |
|---|---|
| $0 < d \leqslant 2$ | $x$ |
| $2 < d \leqslant 4$ | 11 |
| $4 < d \leqslant 6$ | 8 |
| $6 < d \leqslant 8$ | 6 |
| $8 < d \leqslant 10$ | 5 |

The teacher calculated that an estimate for the mean distance travelled by the whole group of students was 4.25 km.

Work out the value of $x$.
Show your working clearly.

$x =$ .....

**(Total for Question 11 is 4 marks)**

**12** The frequency table gives information about the numbers of mice in some nests.

| Number of mice | Frequency |
|---|---|
| 5 | 4 |
| 6 | 13 |
| 7 | 16 |
| 8 | $x$ |
| 9 | 6 |

The mean number of mice in a nest is 7

Work out the value of $x$.

$x =$

**(Total for Question 12 is 4 marks)**

**13** The frequency table gives information about the number of points scored by a player.

| Number of points | Frequency |
|---|---|
| 0 | 13 |
| 1 | 17 |
| 2 | 8 |
| 3 | $x$ |
| 4 | 11 |

The mean number of points scored is 2

Work out the value of $x$

$x =$ .....

**(Total for Question 13 is 4 marks)**