Mean from a Frequency Table

ANSWERS

1

The table shows the number of pets 20 students have. Work out the mean number of pets.

Pets	Frequency	Frequency × value
0	6	6 × 0 = 0
1	7	7 × 1 = 7
2	4	4 × 2 = 8
3	3	3 × 3 = 9
Total	**20**	24

Mean = 24 ÷ 20

Mean = 1.2

2

A rugby team played 25 matches. The table shows the number of tries it scored in each match. Work out the mean.

Tries	Frequency	Frequency × value
0	3	3 × 0 = 0
1	8	8 × 1 = 8
2	7	7 × 2 = 14
3	5	5 × 3 = 15
4	2	2 × 4 = 8
Total	**25**	45

Mean = 45 ÷ 25

Mean = 1.8

3

Some office workers said how many cups of tea they drank yesterday. Work out the mean.

Cups	Frequency	Frequency × value
0	3	3 × 0 = 0
1	9	9 × 1 = 9
2	9	9 × 2 = 18
3	6	6 × 3 = 18
4	3	3 × 4 = 12
Total	30	57

57 ÷ 30

Mean = 1.9

4

The table shows the number of bedrooms in 30 houses.

(a) Find the mode.
(b) Work out the range.

Bedrooms	Frequency
1	4
2	9
3	11
4	5
5	1
Total	**30**

(a) 3 bedrooms (b) 5 − 1 = 4

5

21 hens each laid some eggs in one week. The table shows the results. Find the median number of eggs.

Eggs	Frequency
3	2
4	5
5	8
6	4
7	2
Total	**21**

(21 + 1) ÷ 2 = 11th value

Median = 5 eggs

6

24 students said how many times they used the canteen this week.

(a) Find the mode.
(b) Find the median.

Visits	Frequency
1	2
2	9
3	7
4	4
5	2
Total	**24**

12.5th: the 12th and 13th are 3

(a) 2 (b) 3

7

The table shows the shoe sizes of 25 students.

(a) Work out the mean.
(b) Find the median.

Shoe size	Frequency	Frequency × value
3	2	2 × 3 = 6
4	6	6 × 4 = 24
5	9	9 × 5 = 45
6	5	5 × 6 = 30
7	3	3 × 7 = 21
Total	**25**	126

(a) 5.04 (b) 5

8

30 people went fishing. Ravi says the mean number of fish caught is 48 ÷ 5 = 9.6. Explain his mistake. Work out the mean.

Fish	Frequency	Frequency × value
0	6	6 × 0 = 0
1	10	10 × 1 = 10
2	7	7 × 2 = 14
3	4	4 × 3 = 12
4	3	3 × 4 = 12
Total	**30**	48

5 is the rows, not the total frequency

Mean = 48 ÷ 30 = 1.6

Mean from a Frequency Table *further practice*

ANSWERS

9

40 students said how many portions of fruit they ate yesterday.
Work out the mean.

Portions	Frequency	*Frequency × value*
0	4	*4 × 0 = 0*
1	8	*8 × 1 = 8*
2	12	*12 × 2 = 24*
3	8	*8 × 3 = 24*
4	6	*6 × 4 = 24*
5	2	*2 × 5 = 10*
Total	**40**	*90*

90 ÷ 40

Mean *2.25*

10

31 people counted the keys on their key ring.
Find (a) the mode, (b) the median and (c) the range.

Keys	Frequency
2	3
3	11
4	9
5	5
6	3
Total	**31**

16th value is 4; range 6 – 2

(a) *3* **(b)** *4* **(c)** *4*

11

The number of people at each of 20 tables in a café:
2, 4, 3, 2, 1, 2, 4, 3, 2, 2, 3, 4, 1, 2, 3, 2, 4, 3, 1, 2
Complete the table and work out the mean.

People	Frequency	*Frequency × value*
1	*3*	*3 × 1 = 3*
2	*8*	*8 × 2 = 16*
3	*5*	*5 × 3 = 15*
4	*4*	*4 × 4 = 16*
Total	*20*	*50*

Mean *2.5*

12

Two classes did a quiz. The table shows their scores out of 4. Which class had the higher mean score? Show how you know.

Score	Class A	Class B
1	2	5
2	6	4
3	8	6
4	4	10
Total	**20**	**25**
Mean	*2.7*	*2.84*

54 ÷ 20 and 71 ÷ 25

Answer *Class B*

13

A fairground ride has three prices. The table shows the tickets sold in one hour. Work out the mean price of a ticket.

Price	Frequency	*Frequency × value*
£2	14	*14 × £2 = £28*
£3	18	*18 × £3 = £54*
£5	8	*8 × £5 = £40*
Total	**40**	*£122*

£122 ÷ 40

Mean *£3.05*

14

20 students said how many pets they have. Find the median.

Pets	Frequency
0	5
1	5
2	6
3	4
Total	**20**

the 10th is 1, the 11th is 2

Median *1.5*

15

Jo says the mean of this table is 4.2.
Without working out the mean, explain how you know she is wrong.

Goals	Frequency
0	8
1	7
2	6
3	4
Total	**25**

it must be between 0 and 3

16

Amir says the mode of this table is 12.
Explain his mistake and give the mode.

Siblings	Frequency
0	3
1	6
2	12
3	5
4	2
Total	**28**

12 is the highest frequency

Mode *2*