

Frequency tables



Construct and read frequency tables: find the mode, the total, and threshold-style counts.

Name _____

Date _____

Show your method

The mode is the value or class with the highest frequency. The total is the sum of the whole frequency column. A threshold question (e.g. "3 or more") needs several rows added together, not just one.

Worked example A tally chart records pets owned by 20 students. Find the mode and the total.

Pets	Tally	Frequency
0		4
1		7
2		5
3		4

Mode: '1 pet' has the highest frequency (7).

Total: $4 + 7 + 5 + 4 = 20$

1. How many students own 3 pets?

Pets	Tally	Frequency
0		4
1		7
2		5
3		4

Solution

4 (read directly)

2. What is the mode number of pets owned?

Pets	Tally	Frequency
0		4
1		7
2		5
3		4

Solution

1 pet (highest frequency, 7)

3. What is the total number of students?

Pets	Tally	Frequency
0		4
1		7
2		5
3		4

Solution

$4 + 7 + 5 + 4 = 20$

4. How many matches had 3 goals scored?

Goals	Tally	Frequency
0		2
1		4
2		5
3		3
4		1

Solution

3 (read directly)

5. Which number of goals is the mode?

Goals	Tally	Frequency
0		2
1		4
2		5
3		3
4		1

Solution

2 goals (highest, 5)

6. How many matches had 3 or more goals?

Goals	Tally	Frequency
0		2
1		4
2		5
3		3
4		1

Solution

$3 + 1 = 4$

7. Using the tally marks, how many people have Blue eyes?

Eye colour	Tally	Frequency
Brown		5
Blue		4
Green		3
Hazel		2

Solution

7

8. What is the total number of people surveyed?

Eye colour	Tally	Frequency
Brown		5
Blue		4
Green		3
Hazel		2

Solution

$12 + 7 + 3 + 2 = 24$

9. Explain what the 'mode' of a frequency table means.

Solution

The value/category with the highest frequency.

Frequency tables (continued)

Read ungrouped and grouped tables for threshold counts and percentages.



Name _____

Date _____

10. How many students read 4 or more books?

Books	0	1	2	3	4	5
Frequency	3	5	6	4	3	2

Solution

$$3 + 2 = 5$$

11. What is the total number of students?

Books	0	1	2	3	4	5
Frequency	3	5	6	4	3	2

Solution

$$3 + 5 + 6 + 4 + 3 + 2 = 23$$

12. Which number of books read is the mode?

Books	0	1	2	3	4	5
Frequency	3	5	6	4	3	2

Solution

2 books (highest, 6)

13. What is the modal class?

Time (min)	0-9	10-19	20-29	30-39
Frequency	6	9	4	1

Solution

10-19 (highest, 9)

14. How many people took 20 minutes or more?

Time (min)	0-9	10-19	20-29	30-39
Frequency	6	9	4	1

Solution

$$4 + 1 = 5$$

15. Explain the difference between an ungrouped and a grouped frequency table.

Solution

Ungrouped: one row per exact value. Grouped: data collected into class intervals.

16. How many students scored 70% or more?

Marks (%)	0-49	50-69	70-84	85-100
Frequency	5	10	8	2

Solution

$$8 + 2 = 10$$

17. What percentage of students scored below 50%?

Marks (%)	0-49	50-69	70-84	85-100
Frequency	5	10	8	2

Solution

$$5/25 = 20\%$$

18. A tally is 2 complete groups of five, plus 3 remainder strokes. What frequency is this?

Solution

$$2 \times 5 + 3 = 13$$