LESSON MAKER PRO

Count the Crowd

Turn a large spreadsheet into a useful summary.

HIGH SCHOOL · MT.CORE.DATA.INT.1

MT.CORE.DATA.INT.1 "Use technology to organize data, including very large data sets, into a useful and manageable structure."

NAME _____ DATE _____

GROUP, COUNT, COMPARE

A spreadsheet can summarize thousands of records in a frequency table with one row per category. Add counts when you combine categories, then divide by the total to find the group's share. Use groups that do not overlap so each record is counted once.

WORKED EXAMPLE

A spreadsheet groups 1,000 app sessions by game type. What percent were Puzzle or Strategy sessions?

APP SESSIONS

Game type	Sessions
Puzzle	135
Strategy	265
Arcade	600

1. Combine the two counts: 135 + 265 = 400.
2. Check the total: 135 + 265 + 600 = 1,000.
3. Find the share: 400/1,000 = 0.40 = 40%.

Answer: 40%

PRACTICE 6 problems

1 A spreadsheet groups trips to school by travel method. How many trips were made without a motor?

TRIPS TO SCHOOL

Travel method	Trips
Walk	90
Bike	210
Car	330

ANSWER _____

2 This spreadsheet summary groups song requests by genre. How many requests were recorded in all?

SONG REQUESTS

Genre	Requests
Pop	110
Hip-hop	190
Rock	250

ANSWER _____

3 A spreadsheet groups 300 downloads by type. What percent were playlists?

DOWNLOADS

Type	Downloads
Podcasts	60
Albums	90
Playlists	150

ANSWER _____

4 A spreadsheet groups game scores into ranges. How many scores were from 10 through 29?

GAME SCORES

Score range	Scores
0-9	45
10-19	55
20-29	70
30-39	30

ANSWER _____

5 This summary has one row for each week's club choices. Combine the matching rows. How many students chose Art?

CLUB CHOICES

Week	Club	Students
1	Art	36
1	Music	40
2	Art	24
2	Sports	50

ANSWER _____

6 A spreadsheet lists 2,400 movie picks in cells C2:C2401. Each cell says Action, Comedy, or Drama. Write a spreadsheet formula that counts the Comedy picks.

ANSWER _____

APPLY IT Show your work

1 Students use a spreadsheet to summarize 2,500 views of videos on a school channel. What percent of the views were for videos shorter than 3 minutes?

SCHOOL CHANNEL VIEWS

Video length	Views
Under 1 minute	900
1 to under 3 minutes	700
3 minutes or more	900

ANSWER _____

2 A student council spreadsheet records merch orders from two weeks. Group the orders by product. Which product had more orders, and how many more?

STUDENT COUNCIL MERCH ORDERS

Week	Product	Orders
1	Hoodie	48
1	Sticker pack	32
2	Hoodie	72
2	Sticker pack	68

ANSWER _____

CHALLENGE One step up

A spreadsheet holds 1,200 food delivery times in cells B2:B1201. Two filters give the counts shown. How many deliveries took exactly 15 minutes? Write a spreadsheet formula that would check your result, and explain why the filter counts cannot simply be added.

DELIVERY TIME FILTERS

Filter	Matches
15 minutes or less	470
15 minutes or more	810

WORK SPACE AND ANSWER

Count the Crowd

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A spreadsheet groups trips to school by travel method. How many trips were made without a motor?	**300 trips**
2	This spreadsheet summary groups song requests by genre. How many requests were recorded in all?	**550 requests**
3	A spreadsheet groups 300 downloads by type. What percent were playlists?	**50%**
4	A spreadsheet groups game scores into ranges. How many scores were from 10 through 29?	**125 scores**
5	This summary has one row for each week's club choices. Combine the matching rows. How many students chose Art?	**60 students**
6	A spreadsheet lists 2,400 movie picks in cells C2:C2401. Each cell says Action, Comedy, or Drama. Write a spreadsheet formula that counts the Comedy picks.	**=COUNTIF(C2:C2401,"Comedy")**

PART 2 · APPLY IT

1. **64%** Combine the first two groups: 900 + 700 = 1,600 views. Then 1,600/2,500 = 0.64 = 64%.
2. **Hoodies, by 20 orders** Hoodies had 48 + 72 = 120 orders, and sticker packs had 32 + 68 = 100. The difference is 20.

CHALLENGE

80 deliveries. The formula =COUNTIF(B2:B1201,15) checks the result. Adding 470 + 810 counts the 15-minute deliveries twice, so 470 + 810 - 1,200 = 80.

Accept equivalent spreadsheet formulas that count the specified entries. In the challenge, accept an explanation that identifies 15-minute deliveries as the overlap.