

Grade 8 - Two-Way Tables and Relative Frequency - Test

Common Core 8.SP.A.4 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This 20-point test checks two-way tables, relative frequencies and association between two categorical variables (Common Core 8.SP.A.4). Work alone, show every step, and write each final answer clearly. You have 45 minutes. Calculators are not needed unless a question says so.

About this test

- Grade: Grade 8
- Chapter: Two-Way Tables and Relative Frequency
- Standards: 8.SP.A.4
- Time: 45 minutes
- Total: 20 points

Question 1 - Read the table [3 pts]

	Likes math	Does not	Total
Plays chess	24	6	30
No chess	30	40	70
Total	54	46	100

Survey of 100 students.

A survey of 100 students asked about chess and liking math. (a) How many students play chess? (b) How many do not like math? (c) How many play chess and like math?

Question 2 - Complete a table [3 pts]

	Soccer	Not soccer	Total
Grade 7	28	12	?
Grade 8	32	18	50
Total	?	30	?

A table with blanks.

Find the missing totals: the Grade 7 total, the soccer total and the grand total.

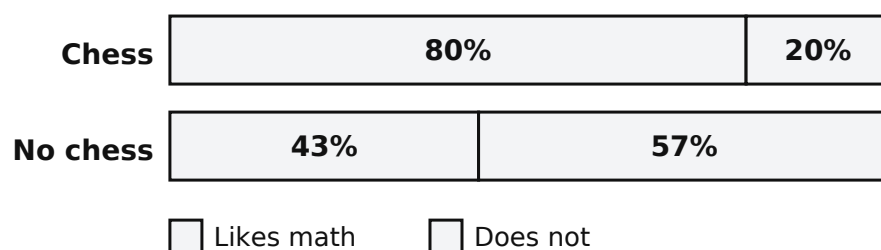
Question 3 - Relative frequencies [3 pts]

In the chess and math survey (chess: 24 like math, 6 do not; no chess: 30 like math, 40 do not), find the percent of chess players who like math and the percent of non-players who like math.

Question 4 - Association [2 pts]

Is there an association between playing chess and liking math in the survey? Use your percents to explain.

Question 5 - Segmented bars [3 pts]



Percent who like math.

The bars show row percents. Which group has a greater percent who like math? What does the difference in bars show about association?

Question 6 - Build a table [2 pts]

Of 50 students, 30 are in band. Of those in band, 18 also play a sport. Of the 20 students not

in band, 12 play a sport. Build a two-way table (band by sport) with totals.

Question 7 - Explain [1 pt]

Why is it better to compare percents than counts when the groups have different sizes?

Question 8 - Cause [3 pts]

A table shows that students who ride the bus to school are more likely to be on time. Does riding the bus cause students to be on time? Explain.