LESSON MAKER PRO

Table Talk

Use totals and relative frequencies to compare data.

HIGH SCHOOL · MA.912.DP.1

MA.912.DP.1 "Summarize, represent and interpret categorical and numerical data with one and two variables."

NAME _____ DATE _____

CHOOSE THE RIGHT TOTAL

In a two-way table, use the total named in the question as the denominator. To compare groups, find each group's conditional relative frequency, then compare the results.

WORKED EXAMPLE

In an art club, 14 students chose painting. Of those students, 7 are ninth graders. What percent of painting students are ninth graders?

1. Use the painting total: 7/14.
2. Simplify: 1/2.
3. Convert to a percent: 50%.

Answer: 50%

PRACTICE 5 problems

1 A survey has 9 gamers and 6 non-gamers in a class of 15. What is the relative frequency of gamers?

ANSWER _____

2 What fraction of bus riders are tenth graders?

Grade	Walk	Bus
9th	2	3
10th	4	8

ANSWER _____

3 What is the joint relative frequency of ninth graders who own a bike?

Grade	Owns bike	No bike
9th	5	3
10th	4	8

ANSWER _____

4 Which group is more likely to have a job? Use conditional frequencies.

Group	Has job	No job
Plays sport	12	8
No sport	3	9

ANSWER _____

5 Find the missing value.

Group	A	B	Total
X	6	?	17
Y	5	10	15

ANSWER _____

APPLY IT Show your work

1 Students reported music type and quiz result. Which group had the higher pass rate, and by how many percentage points?

Music	Passed	Did not pass
Instrumental	15	5
Lyrics	6	9

2 Two students training for a dance audition tracked practice minutes on four days. Student A: 20, 25, 30, 45. Student B: 10, 30, 35, 45. Find each mean. Which student has the greater range?

CHALLENGE One step up

A student says tenth graders are more likely to buy lunch because 24 is greater than 18. Evaluate this claim using conditional frequencies.

Grade	Buys lunch	Brings lunch
9th	18	12
10th	24	16

Table Talk

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A survey has 9 gamers and 6 non-gamers in a class of 15. What is the relative frequency of gamers?	**3/5**
2	What fraction of bus riders are tenth graders?	**8/11**
3	What is the joint relative frequency of ninth graders who own a bike?	**1/4**
4	Which group is more likely to have a job? Use conditional frequencies.	**Students who play a sport**
5	Find the missing value.	**11**

PART 2 · APPLY IT

1. **Instrumental listeners, by 35 percentage points.** Instrumental listeners passed at 15/20 = 75%. Lyrics listeners passed at 6/15 = 40%, so the difference is 35 percentage points.
2. **Both means are 30 minutes. Student B has the greater range, 35 minutes.** Each set totals 120, so each mean is 120/4 = 30. The ranges are 45 - 20 = 25 and 45 - 10 = 35.

CHALLENGE

No. Ninth graders buy lunch at 18/30 = 3/5, and tenth graders buy lunch at 24/40 = 3/5. The rates are equal.

Accept equivalent fractions and percentages where appropriate. For comparison items, students must use the correct row or column total as the denominator.