LESSON MAKER PRO

Category Clues

Read tables, compare groups, and make conclusions.

HIGH SCHOOL · MA.912.DP.3.5

MA.912.DP.3.5 "Solve real-world problems involving univariate and bivariate categorical data."

NAME _____ DATE _____

FIND THE RIGHT TOTAL

A two-way table sorts one group by two categories. For a conditional relative frequency, divide the count in the requested cell by the total for the condition.

WORKED EXAMPLE

In a snack poll, 18 students choose pretzels and 12 choose popcorn. What fraction choose pretzels?

1. Find the total: 18 + 12 = 30.
2. Write the pretzel fraction: 18/30.
3. Simplify by dividing by 6: 3/5.

Answer: 3/5

PRACTICE 5 problems

1 Travel survey: Bus Walk Group A 14 6 Group B 9 11 How many students walk?

ANSWER _____

2 In a poll, 8 of 14 students choose podcasts over music. What is the relative frequency for podcasts?

ANSWER _____

3 Activity survey: Podcasts No podcasts Plays sports 7 15 Does not play 17 13 What fraction of podcast listeners plays sports?

ANSWER _____

4 Lunch survey: Reusable Single-use Brings lunch 12 9 Buys lunch 7 21 What fraction of all students buys lunch and uses a reusable bottle?

ANSWER _____

5 Drink survey: Tea Coffee Morning 9 27 Afternoon 21 7 Is drink choice associated with time? Use the tea rates.

ANSWER _____

APPLY IT Show your work

1 Student council asks 40 students whether they would vote early for a concert time. Vote early Wait Rides bus 14 6 Other students 10 10 Find the early-vote rate for bus riders and for other students. Is transportation associated with voting early?

WORK SPACE

ANSWER _____

2 An esports club records headset use and online tournament participation. Tournament No tournament Uses headset 16 8 No headset 6 14 What fraction of tournament players uses a headset? What fraction of all members both uses a headset and joins tournaments?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A school store records snack purchases. Bought snack Did not buy Total Athletes 7 ___ 14 Nonathletes ___ 21 28 Total ___ 28 42 Fill in the blanks. Then explain whether athlete status is associated with buying a snack.

WORK SPACE AND ANSWER

Category Clues

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Travel survey: Bus Walk Group A 14 6 Group B 9 11 How many students walk?	**17**
2	In a poll, 8 of 14 students choose podcasts over music. What is the relative frequency for podcasts?	**4/7**
3	Activity survey: Podcasts No podcasts Plays sports 7 15 Does not play 17 13 What fraction of podcast listeners plays sports?	**7/24**
4	Lunch survey: Reusable Single-use Brings lunch 12 9 Buys lunch 7 21 What fraction of all students buys lunch and uses a reusable bottle?	**1/7**
5	Drink survey: Tea Coffee Morning 9 27 Afternoon 21 7 Is drink choice associated with time? Use the tea rates.	**Yes. The tea rates are 25% in the morning and 75% in the afternoon.**

PART 2 · APPLY IT

1. **Bus riders: 7/10. Other students: 1/2. Yes, transportation is associated with voting early.** Divide 14 by 20 for bus riders and 10 by 20 for other students. The rates differ.
2. **8/11; 4/11** Tournament players total 22, so use 16/22. All members total 44, so use 16/44.

CHALLENGE

The blanks are 7, 7, and 14. Yes. Athletes buy snacks at a rate of 1/2, while nonathletes buy snacks at a rate of 1/4.

Accept equivalent fractions and correctly simplified percentages. For association conclusions, accept clear reasoning that compares conditional rates.