

Homework 6.4 Two-Way Frequency Tables

Mr. Lee keeps track of his students' homework completion. He keeps track of how many boys and girls do not complete their homework. He puts who don't complete their homework into 2 categories: first-time offenders and repeat offenders. He uses a table to keep track of the results.

1. In one month, 36 girls and 12 boys did not do their homework for the first time. 12 girls and 30 boys did not do their homework again. Put these figures in the table respectively.

	First Time Offenders	Repeat Offenders	Total
Boys			
Girls			
Total			

2. What is the joint frequency of students who are boys and first time offenders? _____

3. Which marginal frequency is the smallest? _____

4. Which marginal frequency is the largest? _____

5. What is the joint frequency of students who are girls and second time offenders? _____

6. Complete the two-way frequency table for the LSHS Freshman School Transportation Survey.

	Male	Female	Total
Walk		46	
Car	28		45
Bus		12	27
Bike		17	69
Total	129	92	

7. What is the joint frequency of students who are male and rides the bus? _____

8. What is the joint frequency of students who are female and rides a car? _____

9. Which marginal frequency is the smallest? _____

10. Which marginal frequency is the largest? _____

11. What is the joint frequency of students who are male and rides a bike? _____

12. What is the marginal frequency of 27 of a specific transportation? _____

A public opinion survey explored the relationship between age and support for increasing the minimum wage. The results are found in the following two-way frequency table.

	For	Against	No Opinion	TOTAL
Ages 21-40	25	20	5	50
Ages 41-60	30	30	15	75
Over 60	50	20	5	75
TOTAL	105	70	25	200

Frequency Count

13. In the 41 to 60 age group, what *percentage* supports increasing the minimum wage? Explain how you arrived at your percentage. What type of probability is this? Joint, marginal?
14. Out of the people that have no opinion, what *percentage* is over 60 years old?
15. What are the marginal frequencies?
16. What are the joint frequencies?
17. Why are joint and marginal frequencies important when describing trends or associations in data? Do you see any significant trends when looking at the frequencies?