**Creating Two Way Frequency Tables**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Two way frequency tables provide a way to organize two categorical variables.

Marginal Frequencies are in the margin of a two way frequency table. They contain the totals of each row and column.

Joint Frequencies “join” the two variables together. They are the frequencies in the body of the two way frequency table.

Example

Make a two-way frequency table for the following set of data. Use the following age groups: 3-5, 6-8, 9-11,12-14, 15-17.

Youth Soccer League

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gender | Age | Gender | Age | Gender | Age | Gender | Age | Gender | Age |
| M | 4 | F | 7 | M | 17 | M | 5 | F | 10 |
| M | 7 | M | 7 | M | 16 | M | 9 | M | 6 |
| F | 8 | F | 15 | F | 14 | F | 13 | F | 4 |
| F | 6 | M | 13 | M | 14 | M | 15 | M | 5 |
| M | 4 | M | 12 | F | 12 | M | 17 | M | 9 |
| F | 10 | M | 15 | F | 8 | M | 12 | M | 10 |
| F | 11 | F | 16 | M | 13 | F | 13 | F | 15 |

* How many males that are in the soccer league are in the 3-5 year age group?
* How many youth that are in the soccer league are in the 15-17 year age group?
* How many youth that are in the soccer league are female?

Independent Practice

A group of students were surveyed and asked which they preferred: horror movies, family movies, comedies, or action movies. Then and they were asked if they prefer watching movies in a theater or watching movies at home. The following responses were recorded.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Home vs. Theater | Type of Movie | Home vs. Theater | Type of Movie | Home vs. Theater | Type of Movie |
| Home | Comedy | Home | Action | Home | Horror |
| Theater | Horror | Home | Family | Theater | Horror |
| Theater | Horror | Theater | Action | Theater | Action |
| Home | Family | Theater | Action | Theater | Comedy |
| Home | Family | Theater | Comedy | Home | Horror |

 Create a two-way frequency table to organize the data of from the survey

* How many students prefer horror movies?
* How many students, who prefer to watch movies in the theater, also prefer action movies?
* How many students prefer to watch movies at home?