## Algebra 2

## 8-02 Two-Way Tables and Probability

## Two-Way Table

- Displays data from $\qquad$ source that belongs to $\qquad$ different categories
- Entries are $\qquad$ frequencies
- Totals are $\qquad$ frequencies

joint frequency

There are 16 juniors and 24 seniors on a debate team. Of those, 7 juniors and 19 seniors qualify for a state debate competition. Organize this information in a two-way table. Then find and interpret the marginal frequencies.

|  |  | State Competition |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Qualified | Not <br> Qualified | Total |
|  | Jr. |  |  |  |
| 岂 |  |  |  |  |
|  | Sr. |  |  |  |
|  | Total |  |  |  |

## Relative Frequencies

- Joint Relative Frequency
- Ratio of $\qquad$ frequency to $\qquad$ values
- Marginal Relative Frequency
- Sum of $\qquad$ relative frequencies in a $\qquad$ or $\qquad$ -
Make a table showing the relative frequencies.

|  |  | State Competition |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Qualified | Not <br> Qualified | Total |
| $\tilde{\sim}$ <br> U. | Jr. | 7 | 9 | 16 |
|  | Sr. | 19 | 5 | 24 |
|  | Total | 26 | 14 | 40 |


|  |  | State Competition |  |  |
| :--- | :--- | :--- | :---: | :---: |
|  |  | Qualified | Not <br> Qualified | Total |
| ${\hline \multirow{13}{}}{\tilde{\omega}} }$ | Jr. |  |  |  |
|  | Sr. |  |  |  |
|  | Total |  |  |  |

- Ratio of a $\qquad$ frequency to the $\qquad$ frequency
- Can be done for totals or $\qquad$ totals

Make a two-way table that shows the conditional relative frequencies based on (a) the row totals

|  |  | State Competition |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Qualified | Not <br> Qualified | Total |
| $\tilde{\sim}$ <br> U | Jr. | 7 | 9 | 16 |
|  | Sr. | 19 | 5 | 24 |
|  | Total | 26 | 14 | 40 |


|  |  | State Competition |  |
| :--- | :--- | :--- | :---: |
|  |  | Qualified | Not <br> Qualified |
|  | Jr. |  |  |
| }{} |  |  |  |
|  | Sr. |  |  |
|  |  |  |  |

