



**Joint Relative,
Marginal Relative,
& Conditional Relative
Frequency
Foldable**

Thank you for buying my game!

©Foresta Math

Please stop back to my store and let me know how the game went.

<http://www.teacherspayteachers.com/Store/Foresta-Math>

Facebook:

Pinterest: <https://pinterest.com/forestamath>

Email: forestamath@aol.com

Website: <http://forestamath.com>

Chevron Frame by Mercedes Hutchens

<http://www.teacherspayteachers.com/Store/Mercedes-Hutchens>

Instructions

Print or copy page 3 and 4 double sided.

Place the paper so the examples are face down.

Cut along the dotted lines to create flaps.

Fold the paper in half with the examples inside.

Glue the foldable into notes or on a piece of construction paper.

Go through the foldable with your students.

Preview

**Joint
Relative
Frequency**

**Marginal
Relative
Frequency**

**Conditional
Relative
Frequency**

Joint Relative Frequency

The ratio of the frequency in a particular category and the total number of data values.

- 1) Use the two-way frequency table below to find the joint relative frequency of students surveyed who like football and are male.

| Sport Gender | Football | Basketball | Baseball | Total |
|-----------------|----------|------------|----------|-------|
| Male | 24 | 12 | 6 | 42 |
| Female | 6 | 3 | 9 | 18 |
| Total | 30 | 15 | 15 | 60 |

- 2) Use the two-way frequency table below to find the joint relative frequency of students who prefer sugar cookies and are female.

| Cookie Gender | Sugar | Choc Chip | Oatmeal | Total |
|------------------|-------|-----------|---------|-------|
| Male | 15 | 20 | 5 | 40 |
| Female | 20 | 30 | 10 | 60 |
| Total | 35 | 50 | 15 | 100 |

Marginal Relative Frequency

The ratio of the sum of the joint relative frequency in a row or column and the total number of data values.

- 1) Use the two-way frequency table below to find the marginal relative frequency of students surveyed who are male.

| Sport Gender | Football | Basketball | Baseball | Total |
|-----------------|----------|------------|----------|-------|
| Male | 24 | 12 | 6 | 42 |
| Female | 6 | 3 | 9 | 18 |
| Total | 30 | 15 | 15 | 60 |

- 2) Use the two-way frequency table below to find the marginal relative frequency of students who prefer sugar cookies.

| Cookie Gender | Sugar | Choc Chip | Oatmeal | Total |
|------------------|-------|-----------|---------|-------|
| Male | 15 | 20 | 5 | 40 |
| Female | 20 | 30 | 10 | 60 |
| Total | 35 | 50 | 15 | 100 |

Conditional Relative Frequency

The ratio of a joint relative frequency and a related marginal relative frequency.

- 1) Use the two-way frequency table below to find the conditional relative frequency of a student surveyed who prefers football, given that the student is male.

| Sport Gender | Football | Basketball | Baseball | Total |
|-----------------|----------|------------|----------|-------|
| Male | 24 | 12 | 6 | 42 |
| Female | 6 | 3 | 9 | 18 |
| Total | 30 | 15 | 15 | 60 |

- 2) Use the two-way frequency table below to find the conditional relative frequency that a student surveyed is male, given that the student prefers chocolate chip cookies.

| Cookie Gender | Sugar | Choc Chip | Oatmeal | Total |
|------------------|-------|-----------|---------|-------|
| Male | 15 | 20 | 5 | 40 |
| Female | 20 | 30 | 10 | 60 |
| Total | 35 | 50 | 15 | 100 |

Preview

**Joint
Relative
Frequency**

**Marginal
Relative
Frequency**

**Conditional
Relative
Frequency**

Joint Relative Frequency

The ratio of the frequency in a particular category and the total number of data values.

- 1) Use the two-way frequency table below to find the joint relative frequency of students surveyed who like football and are male.

| Sport Gender | Football | Basketball | Baseball | Total |
|-----------------|----------|------------|----------|-------|
| Male | 24 | 12 | 6 | 42 |
| Female | 6 | 3 | 9 | 18 |
| Total | 30 | 15 | 15 | 60 |

$$\frac{\text{likes football and male}}{\text{total}} = \frac{24}{60} = 0.4 = 40\%$$

- 2) Use the two-way frequency table below to find the joint relative frequency of students who prefer sugar cookies and are female.

| Cookie Gender | Sugar | Choc Chip | Oatmeal | Total |
|------------------|-------|-----------|---------|-------|
| Male | 15 | 20 | 5 | 40 |
| Female | 20 | 30 | 10 | 60 |
| Total | 35 | 50 | 15 | 100 |

$$\frac{\text{female and sugar}}{\text{total}} = \frac{20}{100} = 0.2 = 20\%$$

Marginal Relative Frequency

The ratio of the sum of the joint relative frequency in a row or column and the total number of data values.

- 1) Use the two-way frequency table below to find the marginal relative frequency of students surveyed who are male.

| Sport Gender | Football | Basketball | Baseball | Total |
|-----------------|----------|------------|----------|-------|
| Male | 24 | 12 | 6 | 42 |
| Female | 6 | 3 | 9 | 18 |
| Total | 30 | 15 | 15 | 60 |

$$\frac{\text{male}}{\text{total}} = \frac{42}{60} = 0.7 = 70\%$$

- 2) Use the two-way frequency table below to find the marginal relative frequency of students who prefer sugar cookies.

| Cookie Gender | Sugar | Choc Chip | Oatmeal | Total |
|------------------|-------|-----------|---------|-------|
| Male | 15 | 20 | 5 | 40 |
| Female | 20 | 30 | 10 | 60 |
| Total | 35 | 50 | 15 | 100 |

$$\frac{\text{prefers sugar cookies}}{\text{total}} = \frac{35}{100} = 0.35 = 35\%$$

Conditional Relative Frequency

The ratio of a joint relative frequency and a related marginal relative frequency.

- 1) Use the two-way frequency table below to find the conditional relative frequency of a student surveyed who prefers baseball, given that the student is male.

| Sport Gender | Football | Basketball | Baseball | Total |
|-----------------|----------|------------|----------|-------|
| Male | 24 | 12 | 6 | 42 |
| Female | 6 | 3 | 9 | 18 |
| Total | 30 | 15 | 15 | 60 |

$$\frac{\text{prefers baseball}}{\text{total males}} = \frac{6}{42} = 0.14 = 14\%$$

- 2) Use the two-way frequency table below to find the conditional relative frequency that a student surveyed is male, given that the student prefers chocolate chip cookies.

| Cookie Gender | Sugar | Choc Chip | Oatmeal | Total |
|------------------|-------|-----------|---------|-------|
| Male | 15 | 20 | 5 | 40 |
| Female | 20 | 30 | 10 | 60 |
| Total | 35 | 50 | 15 | 100 |

$$\frac{\text{prefers oatmeal cookies}}{\text{total males}} = \frac{5}{40} = 0.125 = 12.5\%$$