**Understanding Percents**

**Percent** means how many out of 100 and is expressed with the symbol **%**. Percents can also be expressed as fractions with a denominator of 100 (and then simplified) and decimals.

 **To convert from Percent to Decimal**:

* + - Place the decimal to the right of the last digit.
		- Move the decimal 2 place to the left.

Examples:

|  |  |
| --- | --- |
| 25% | 9% |

 **To convert from Percent to Decimal**:

* + - Place the digits over 100 as a fraction
		- Simplify the fraction.

Examples:

|  |  |
| --- | --- |
| 25% | 9% |

Complete the following. Write fractions in the simplest form.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Percent** | **Fraction** | **Decimal** |
| 1. | 7% |  |  |
| 2. | 13% |  |  |
| 3. | 48% |  |  |
| 4. | 71% |  |  |
| 5. | 2% |  |  |
| 6. | 10% |  |  |
| 7. | 75% |  |  |

**Let’s Switch It… Decimal to % and Fraction to %**

 **To convert from Decimal to Percent**:

* + - Move the decimal 2 places to the right of where the decimal currently is.
		- Leave there if there is a number following the decimal and place a ‘%’ symbol at the end.
		- If there is no number following the decimal, there is no need to write a decimal, and just put a ‘%’ symbol at the end.

Examples:

|  |  |
| --- | --- |
| 0.38 | 0.7 |

 **To convert from Fraction to Percent**:

* + - Find what number you need to multiply the denominator by to make it 100.
		- Once you know that number, multiply the top and bottom by that number.
		- Take the new top number and write with a ‘%’ symbol following

Examples:

|  |  |
| --- | --- |
| $$\frac{7}{25}$$ | $$\frac{1}{5}$$ |

Complete the following. Write fractions in the simplest form.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Decimal** | **Fraction** | **Percent** |
| 1. |  | $$\frac{16}{50}$$ |  |
| 2. | 1.5 |  |  |
| 3. |  | $$\frac{1}{2}$$ |  |
| 4. | 0.426 |  |  |
| 5. |  | $$\frac{7}{20}$$ |  |
| 6. | 0.3 |  |  |
| 7. |  | $$\frac{3}{4}$$ |  |

**And Lastly… Fraction to Decimal & Decimal to Fraction**

 **To convert from Fraction to Decimal**

* + - Depending on the number of digits, you will convert to tenths, hundredths, thousandths, etc.
		- Once the denominator is a multiple of ten (10, 100, 1000, etc.), you will put in decimal form.

Examples:

|  |  |
| --- | --- |
| **Convert to Tenths** | **Convert to Hundredths** |
| $$\frac{2}{5}$$ | $$\frac{3}{20}$$ |
| $$\frac{9}{10}$$ | $$\frac{3}{4}$$ |

**To convert from Decimal to Fraction**:

* + - Depending on the number of decimal places, you will place the decimal as the numerator of a fraction with a denominator of 10, 100, 1000, etc.
		- Once you have completed this, you will simplify the fraction.

Examples:

|  |  |
| --- | --- |
| **Convert to 1/10** | **Convert to 1/100** |
| 0.6 | 0.75 |
| 0.5 | 0.45 |

Complete the following. Write fractions in the simplest form.

|  |  |  |
| --- | --- | --- |
|  | **Decimal** | **Fraction** |
| 1. |  | $$\frac{16}{50}$$ |
| 2. | 0.25 |  |
| 3. |  | $$\frac{1}{2}$$ |
| 4. | 0.42 |  |
| 5. |  | $$\frac{7}{20}$$ |
| 6. | 0.3 |  |
| 7. |  | $$\frac{1}{4}$$ |