**Mini Lesson #5: Percent of Error and Percent of Change (Math 7- Percent Unit)**

**Part l: Percent of Error**

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| **Percent of Error*** Percent of error is the error applied when comparing a predicted value with an actual value.
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| **How to find percent of error****EXAMPLE:** Joshua uses his thermometer and finds the boiling point of ethyl alcohol to be 75o C.  He looks in a reference book and finds that the predicted boiling point of ethyl alcohol is 80oC.  What is his percent error?**Predicted/Should be (original):****Actual:****Difference:** $\frac{Difference}{Original}$ **=** $\frac{x}{100}$ |
| **EXAMPLES**1. Ariel weighed an object on her balance and recorded a mass of 24.3 grams. The label on the object said that it should weigh 24.5 grams. What is the percent error to the nearest hundredth of a percent?
2. Chase worked in a lab helping pack material that was labeled to weigh 15 ounces. When one of his boxes was pulled and weighed it was 14.5 ounces. What was the percent error to the nearest tenth?
3. A bag of chips says it should weigh 32 oz. You weigh the chips and they actually weigh 28 oz. What is the percent of error?

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**PART ll: Percent of Change**

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| **Percent of Change*** Percent of change is the percent something increases or decreases from its original amount.
* Amount of change \*\*\* Make sure to tell if it **increases or decreases**

 original |
| **How to find percent of change****Example:** The class size went from 35 to 31 students. What was the percent of change?**Original: New: Difference:** $\frac{Difference}{Original}$ **=** $\frac{x}{100}$ |
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| **Examples of Percents of Increase** | **Examples of Percents of Decrease** |
| **% Mark-up**- $ added onto a price to make a profit**% Tax** - $ added onto purchase price**% Tip** – $ added onto cost of a meal | **% Discount** - $ subtracted from original price |

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| **Find the percent of change. Show work!**1. At the beginning of the week the amount of money collected was $97. By Friday the group had collected $569. What is the percent of change?
2. Shoe that cost $100 were on sale for $60. What was the percent of discount?
3. The population of Small Town was 1500 people in 1978. In 1980 the population went to 1250. What was the percent of change in the population?

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