| Name |  |
|------|--|
|      |  |

Date

Mr. Tallman

## Do Now

## Use the percent equation to answer the following questions.

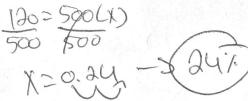
1) Jennifer made a fruit juice using red and green grapes. Thirty percent of the grapes are green. If she used a total of 60 grapes, how many green grapes did she use?

Part = whole (1.) X = 60(.3) (X=18)

2) A serving of ice cream contains 500 calories. 120 of those calories come from fat. What percent of the 500 calories come from fat?

| Λ.   | ç | 120 |
|------|---|-----|
| Pact | - | 190 |

whole: 500 Percent: X



## **Lesson #35 - Percent of Change and Percent Error**

The percent equation can be used to measure the percent of change of different measurements.

## Formula: change = original(%)

Example 1) Fill in the table based on each situation.

|  | Original | New | Change | Percent | Equation |
|--|----------|-----|--------|---------|----------|
| You're 12 years old and will be 18 when you go to college.     | 12       | 18  | 6      | X       | 6=124    |
| A shirt was \$15 and is now \$20                               | 15       | 20  | 5      | X       | 5 = 15X  |
| The temperature was 17° in the morning and 12° in the evening. |          | 15  | 5      | X       | 5=17X    |

| Example 2) Jordan went to buy a sketch book for art that he saw for \$30. When he got to the store, it was marked \$50. What is the percent of change?   |
|--|
| Original: Change = orig (1-)   |
| New:   |
| New: $96$ Change: $96$ $10^{-30}$ |
| 120,696 - 3  |
| Example 3) A skateboard is worth \$400. James bought it for \$100. What is the percent of change?  |
| Oniginal 400 Marge = 01 gcm  |
| New: 100 300 = 400   |
| Change: 1300 r- 75 -> (751/2 decrease)   |
|  |
| 4) A car is worth \$27,000. Tom bought it for \$25,000. What is the percent change?  |
| Original: 27,000 (harge = 013(1.)  |
| New: $\frac{25,000}{27000}$ $\frac{2500}{27000}$ $\frac{27000}{27000}$   |
| Change: 2,000 27000 27000 X=0.07, decrease   |
| 120.0 h -3 (11. acrosse)   |
| 5) Kate bought a necklace for \$3,000. It is worth \$8,000. What is the percent change?  |
| Original: 8,000 (harge = orig(1.)  |
| New: $3,000$ $5000 = 8000(x)$ $62.5\%$   |
| New:   |
| <u>Percent Error</u> – Describes the amount of error there was when measuring something.   |
| Example 6) Alan needs to purchase a bed sheet. He measures his bed to be 7 feet long. His bed is actually 6.5 feet long. What is his percent of error? Round to the nearest whole percent.  Original (Actual measurement): $ \begin{array}{c} 6.5 \\ \hline \end{array} $  |
| Original (Actual measurement):   |
| New (Wrong measurement):   |
| Change:  |
| X= 68, -3(01)  |

| Example 7) Suppose you guess there are 300 gum What is the percent of error?  Original (Actual measurement):   | Charge = Orig(1.)  100 = 400 X  400 400 |
|--|---|
|  | X=0.23-5(251.)                          |
| Now, You Try!  |   |
| 8) Michael wants to practice free-throws. He estiline to the hoop and marks it with chalk. Michael distance should be 15 feet. Find the percent of er Original (Actual measurement): | ror  Change = Orig (7.)                 |
| New (Wrong measurement):   | 1.5=45X<br>15 15<br>X=0.10, -> (10%)    |
| 9) In an experiment, a chemist estimated the amount of liquid in the beaker was 50   | •                                       |
| Original (Actual measurement):50  New (Wrong measurement):50   | Change = Org (1.)                       |
| New (Wrong measurement):5 \( \frac{1}{2} \) Change:2   | 2=30x<br>50 50<br>X=0.04-5(4).          |