

Name: Key

Class:

Topic:

Date:

Main Ideas/Questions	Notes	
PERCENT EQUATION	<p>The percent equation is a quick way to find a part of a whole quantity by <u>multiplying</u> the <u>whole</u> by the percent written as a <u>decimal</u>.</p> $\boxed{\text{part } a} = \boxed{w(\text{whole})} \cdot \boxed{\%}$ <p style="text-align: right;">↑ Written as a decimal!</p>	
	<p>Reminder: To convert a percent to a decimal, divide the percent by 100 OR move the decimal to the left two places.</p>	
EXAMPLES	<p>1. Find 12% of 90. $a = 90(0.12)$ $a = 10.8$</p>	<p>2. Find 96% of 175.</p>
	<p>3. What is 27% of 28? $a = 28(0.27)$ $a = 7.56$</p>	<p>4. What is 48.5% of 300?</p>
	<p>5. Find 2% of 138. $a = 138(0.02)$ $a = 2.76$</p>	<p>6. What is 81.25% of 248?</p>
	<p>7. Kate spent 23% of her last paycheck on groceries. If she made \$908, how much did she spend on groceries? $a = 908(0.23)$ $a = \\$208.84$</p>	<p>8. Mark has only used 8.5% of a 34-oz bottle of shampoo. How many ounces has he used?</p>
	<p>9. There were 80 golfers in the first round of a tournament. Of the 80, 62.5% qualified for the next round. How many did not qualify? $a = 80(0.625)$ $a = 50$ $80 - 50 = 30 \text{ golfers}$</p>	<p>10. Tom is a lawyer who makes \$132,000 per year. If his legal assistant, Alec, makes 53% of his salary, find Alec's salary.</p>

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Discount & Markup	<ul style="list-style-type: none"> Stores frequently discount or markup items. Discounts are <u>decreases</u> from the original price. Markups are <u>increases</u> to the original price. The <u>retail price</u> (or sale price) is the amount the customer ends up paying. 								
Examples	<p>Directions: Find the discount and markup for each, then find the final selling price. Round to the nearest cent when necessary.</p> <table border="0"> <tr> <td style="width: 50%; vertical-align: top;"> <p>1. jeans: \$58, 15% off</p> $\frac{d}{58} = \frac{15}{100} \quad \begin{array}{r} 58.00 \\ - 8.70 \\ \hline \end{array}$ <p>Discount: <u>\$8.70</u></p> <p>Selling Price: <u>\$49.30</u></p> </td> <td style="width: 50%; vertical-align: top;"> <p>2. tablet: \$492, 20% off</p> $\frac{d}{492} = \frac{20}{100} \quad \begin{array}{r} 492.00 \\ - 98.40 \\ \hline \end{array}$ <p>Discount: <u>\$98.40</u></p> <p>Selling Price: <u>\$393.60</u></p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>3. bike: \$295.49, 60% off</p> $\frac{d}{295.49} = \frac{60}{100}$ <p>Discount: <u>\$177.29</u></p> <p>Selling Price: <u>\$118.20</u></p> </td> <td style="vertical-align: top;"> <p>4. microwave: \$89.99, 5% off</p> <p>Discount: _____</p> <p>Selling Price: _____</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>5. wedding dress: \$625, 3% markup</p> $\frac{m}{625} = \frac{3}{100} \quad \begin{array}{r} 625 \\ + 18.75 \\ \hline \end{array}$ <p>Markup: <u>\$18.75</u></p> <p>Selling Price: <u>\$643.75</u></p> </td> <td style="vertical-align: top;"> <p>6. sofa: \$1,490.95, 40% markup</p> <p>Markup: _____</p> <p>Selling Price: _____</p> </td> </tr> <tr> <td style="vertical-align: top;"> <p>7. digital camera: \$250, 12% markup</p> $\frac{m}{250} = \frac{12}{100} \quad \begin{array}{r} 250 \\ + 30 \\ \hline \end{array}$ <p>Markup: <u>\$30</u></p> <p>Selling Price: <u>\$280</u></p> </td> <td style="vertical-align: top;"> <p>8. cell phone: \$595.79, 25% markup</p> <p>Markup: _____</p> <p>Selling Price: _____</p> </td> </tr> </table>	<p>1. jeans: \$58, 15% off</p> $\frac{d}{58} = \frac{15}{100} \quad \begin{array}{r} 58.00 \\ - 8.70 \\ \hline \end{array}$ <p>Discount: <u>\$8.70</u></p> <p>Selling Price: <u>\$49.30</u></p>	<p>2. tablet: \$492, 20% off</p> $\frac{d}{492} = \frac{20}{100} \quad \begin{array}{r} 492.00 \\ - 98.40 \\ \hline \end{array}$ <p>Discount: <u>\$98.40</u></p> <p>Selling Price: <u>\$393.60</u></p>	<p>3. bike: \$295.49, 60% off</p> $\frac{d}{295.49} = \frac{60}{100}$ <p>Discount: <u>\$177.29</u></p> <p>Selling Price: <u>\$118.20</u></p>	<p>4. microwave: \$89.99, 5% off</p> <p>Discount: _____</p> <p>Selling Price: _____</p>	<p>5. wedding dress: \$625, 3% markup</p> $\frac{m}{625} = \frac{3}{100} \quad \begin{array}{r} 625 \\ + 18.75 \\ \hline \end{array}$ <p>Markup: <u>\$18.75</u></p> <p>Selling Price: <u>\$643.75</u></p>	<p>6. sofa: \$1,490.95, 40% markup</p> <p>Markup: _____</p> <p>Selling Price: _____</p>	<p>7. digital camera: \$250, 12% markup</p> $\frac{m}{250} = \frac{12}{100} \quad \begin{array}{r} 250 \\ + 30 \\ \hline \end{array}$ <p>Markup: <u>\$30</u></p> <p>Selling Price: <u>\$280</u></p>	<p>8. cell phone: \$595.79, 25% markup</p> <p>Markup: _____</p> <p>Selling Price: _____</p>
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Sales Tax & Tip	<ul style="list-style-type: none"> Sales tax is a percentage <u>multiplied</u> to the selling price. A tip is a percentage <u>multiplied</u> to the total bill. 								

Examples

9. Find the final price of a \$849.99 laptop with 6% sales tax.

$$\frac{t}{849.99} = \frac{6}{100}$$

$$t = \$51.00$$

$$\begin{array}{r} 849.99 \\ + 51.00 \\ \hline \end{array}$$

Total = \$900.99

10. Find the final price of a \$325 lacrosse stick with 7.25% sales tax.

11. A \$105 watch is selling for 30% off. Find the final price of the watch if the sales tax is 8%.

$$\frac{d}{105} = \frac{30}{100}$$

$$d = \$31.50$$

$$\begin{array}{r} 105.00 \\ - 31.50 \\ \hline 73.50 \\ + 5.88 \\ \hline \end{array}$$

$$\frac{t}{73.50} = \frac{8}{100}$$

$$t = \$5.88$$

Total = \$79.38

12. A \$125 DVD player is selling for 10% off. Find the final price of the DVD player if the sales tax is 5.5%.

13. Katy bought a \$76 dress at 33% off and a \$52 pair of shoes at 15% off. If sales tax is 6.75%, how much did she pay in total?

$$\frac{d}{76} = \frac{33}{100}$$

$$d = 25.08$$

$$\frac{d}{52} = \frac{15}{100}$$

$$d = 7.80$$

$$\frac{t}{97.72} = \frac{6.75}{100}$$

$$t = \$6.60$$

$$\begin{array}{r} 53.52 \\ + 44.20 \\ \hline 97.72 \\ + 6.60 \\ \hline \end{array}$$

Dress = \$53.52 Shoes = \$44.20 Total = \$104.32

14. For parties of six or more, a restaurant adds a 20% gratuity (or tip). If a dinner bill for a large party comes to \$148.25, find the total dinner bill with tip.

15. Greg and Alana went out to dinner. Their dinner bill came to \$68.89. If they had a \$10 coupon and left a 15% tip, how much did they pay in total?

$$\begin{array}{r} 68.89 \\ - 10.00 \\ \hline 58.89 \\ + 10.33 \\ \hline \end{array}$$

$$\frac{t}{68.89} = \frac{15}{100}$$

$$t = \$10.33$$

\$69.22

