

Math 6 Unit 3  
Unit Rates and Percentages  
Additional Practice Problems KEY

<p>1. How many centimeters are in 8 feet ? ( 1 inch = 2.5 centimeters)</p> <p>8ft = 96in 96 in = 240 cm</p>	<p>2.Sanae ran 9 kilometers in 40.5 minutes. Daniel ran 6 miles in 48.6 minutes. Who ran faster? ( there are 1.6 km in 1 mile )</p> <p>Daniel 6 miles = 9.6 km 9.6 km in 48.6 min = 1 km in 5.06 min</p> <p>Sanae 9 km in 40.5 min = 1 km in 4.5 min</p> <p>Sanae</p>
<p>3.A grocery store sells a small 8 ounce bag of pecans for \$3.49 and a large 1.5 pound container for \$9.99. What is the better deal? by how much? ( 16 ounces = 1 pound )</p> <p>small bag 8 oz for 3.49 = 1 oz for \$0.44</p> <p>large container 1.5 lbs = 24 oz for 9.99 = 1 oz for \$0.42</p> <p>large container by \$0.02</p>	<p>4. If 4 students have blonde hair and this represents 20% of the class, find 10%, 25%,50%, and 100% of the class.</p> <p>10% = 2 25% = 5 50% = 10 100% = 20</p>
<p>5. What is 40% of 80 ?</p> <p>32</p>	<p>6. 60% is 150 of what number ?</p> <p>250</p>

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7. If 12 Android phones is 30% of the group then what is 10%, 20%, 25%, 40%, and 75% of the group ?

10% = 4  
20% = 8  
25% = 10  
40% = 16  
75% = 30

8. Different states have different sales tax rates. The table below shows a couple of these. Find the tax for each state if a \$24 shirt is purchased.

state	sales tax
NC	4.75%
SC	6%
VA	4.3%

NC = \$1.14  
SC = \$1.44  
VA = \$1.03

9. The cost for getting Lin's haircut was \$28. She wanted to leave a 15% tip. What was the tip amount? What was the total cost ?

tip = \$4.20  
total = \$32.20

10. If Daniel buys a yearbook at least 4 months early there is a 10% discount. The discounted cost is \$37.80. What will be the full cost of the yearbook at the end of the year?

\$42.00

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<p>11. What percent is 21 of 70 ?</p> <p>a.) <b>30%</b> b.) 7% c.) 14% d.) 50%</p>	<p>12. What is 35% of 210 ?</p> <p>a.) 52.5 b.) 62 c.) <b>73.5</b> d.) 16.6</p>								
<p>13. In Mrs. Mary's garden 4 out of the 20 plants are tomatoes. What percent of the garden is tomatoes?</p> <p>a.) 4% b.) 5% c.) <b>20%</b> d.) 40%</p>	<p>14. There were 30 superheroes in Avengers:Endgame. 12 were males. What percent of superheroes were female?</p> <p>a.) 40% b.) 12% c.) 45% d.) <b>60%</b></p>								
<p>15. An 8 ounce M&amp;M bag was emptied, examined, and tallied. The table shows the number of M&amp;M's in each color.</p> <table border="1" style="margin: 10px auto;"> <thead> <tr> <th>color</th><th>frequency</th></tr> </thead> <tbody> <tr> <td>red</td><td>6</td></tr> <tr> <td>white</td><td>5</td></tr> <tr> <td>blue</td><td>3</td></tr> </tbody> </table> <p>What approximate percent of the bag is red?</p> <p>a.) 36% b.) 21% c.) 60% d.) <b>43%</b></p>	color	frequency	red	6	white	5	blue	3	<p>16. Jack got 17 out of 20 questions on the last math test. What is his grade percentage?</p> <p>a.) 17% b.) <b>85%</b> c.) 90% d.) 70%</p>
color	frequency								
red	6								
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<p>17. If 80% of customers order chocolate ice cream then how many customers came into the store if 76 customers purchased chocolate?</p> <p>a.) 61 b.) 15 <b>c.) 95</b> d.) 380</p>	<p>18. Jada bought a pair of rollerskates for \$35.99. There was a 7% sales tax. What was the tax?</p> <p><b>a.) \$2.52</b> b.) \$33.47 c.) \$25.19 d.) \$3.59</p>
<p>19. Patio furniture is on sale for 30% off. If Matthew wants to purchase a table set for \$250. How much will he save?</p> <p>a.) \$17.50 b.) \$7.50 c.) \$175.00 <b>d.) \$75.00</b></p>	<p>20. Mother's Day brunch at a local restaurant comes to a subtotal of \$65.50. A 20% tip is expected. What is the total amount that must be paid?</p> <p>a.) \$13.10 <b>b.) \$78.60</b> c.) \$52.40 d.) \$117.90</p>