

Math 6 Plus Unit 9  
Proportional Relationships and Percentages  
Extra Practice Problems

<p>1) Avery earned a raise of an additional \$2.50 per hour. Initially, she started at \$10.00 an hour. What is the percent increase in Avery's hourly pay?</p>	<p>2) A toy car is 3 inches long. An actual size car is 180 inches long. What is the percent increase from the toy car to actual size car?</p>												
<p>3) Use the formula <math>i = prt</math>, where <math>i</math> is the interest earned, <math>p</math> is the principal (starting amount), <math>r</math> is the interest rate expressed as a decimal, and <math>t</math> is the time in years.</p> <p>Graham has \$720 in a savings account that earns 1.5% annually. How much total will he have in 6 months?</p>	<p>4) Please observe the store chart:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr style="background-color: #cccccc;"> <th style="padding: 5px;">Item</th> <th style="padding: 5px;">Cost</th> <th style="padding: 5px;">Current Promotion</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Shirt</td> <td style="padding: 5px;">\$14.99</td> <td style="padding: 5px;">15% Off</td> </tr> <tr> <td style="padding: 5px;">Jacket</td> <td style="padding: 5px;">\$49.99</td> <td style="padding: 5px;">40% Off</td> </tr> <tr> <td style="padding: 5px;">Socks</td> <td style="padding: 5px;">\$3.98</td> <td style="padding: 5px;">Buy 1 Pair Get 1 Pair 50% Off</td> </tr> </tbody> </table> <p>If we purchase two pairs of socks, 1 jacket, and 1 shirt, how much will we spend in total with a sales tax rate of 6.5%?</p>	Item	Cost	Current Promotion	Shirt	\$14.99	15% Off	Jacket	\$49.99	40% Off	Socks	\$3.98	Buy 1 Pair Get 1 Pair 50% Off
Item	Cost	Current Promotion											
Shirt	\$14.99	15% Off											
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<p>5) A car salesperson makes 25% commission on each car sold. If the salesperson just sold a vehicle for \$42,000, how much in commission was made?</p>	<p>6) Anthony found a sweater on sale for 15% off! The discount price of the sweater before tax is \$22.74. What is the regular price of the sweater before the discount?</p>												

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7) When a skydiver is balled up when he/she jumps out of a plane, the skydiver falls at about 200 mph. When arms and legs are fully extended, the skydiver will fall at a rate of 125 mph. Complete the table for a skydiver with arms and legs fully extended.

Time (Minutes)	Distance (Miles)
30	
60	125
	$156\frac{1}{4}$

What is the unit rate for a time of one minute? Write solution as a mixed number.

8) Devika pours 4.2 ounces of water from a full bottle. She estimates that she poured out 35% of the water in the bottle. About how much water was in the full bottle?

9) Kristen is feeding her llamas. She uses  $5\frac{1}{4}$  cups of a grain and vitamin mixture to feed 7 llamas. Which of these equations represents the relationship between  $x$ , cups of food mixture, and  $y$ , number of llamas?

A.  $x = \frac{21}{4}y$

B.  $x = \frac{3}{4}y$

C.  $x = \frac{4}{3}y$

D.  $x = \frac{9}{4}y$

10) Jamal reads every day. He read 55 pages on Tuesday, which is 25% less than what he read on Monday. How many total pages did Jamal read on Monday and Tuesday? Write solution as a mixed number.