

MrA

**GRADE 11 ESSENTIAL  
UNIT B- INTEREST AND CREDIT  
INTEREST EXAMPLES - SIMPLE AND COMPOUND**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. An investment project pays simple interest at a rate of **7.5** percent per annum. If a couple invests **\$1900** in this project, how much interest will they earn if they invest for three years?
  
2. How much interest is earned on an investment which pays simple interest at a rate of  $6\frac{1}{4}$  percent annually if \$2500 is invested for nine months?
  
3. A **\$5000** deposit in a savings account earns interest of **\$68.75 in three months**. A three-month certificate account pays interest at a rate of **6.2** percent a year calculated every **three months**.
  - a. How much interest would be earned on the three-month certificate in three months?
  
  - b. How much more interest is earned in three months by investing in the certificate rather than the savings account?
  
4. A credit union offers a six-month term deposit account that pays interest at a rate of **7.2 percent** a year (per annum). You plan to deposit **\$6000** in this account for six months and then re-nvest the principal and interest for another six months at the same rate. How much interest will you earn in a year?

<p><b>For the 1st six months:</b></p> $i = p \cdot r \cdot t$ $i = (6000)(0.072)(0.5)$ $i =$ <p><b>Total amount = <math>i + p</math></b></p>	<p><b>For the 2nd six months:</b></p> $i = p \cdot r \cdot t$ $i = ( \quad ) (0.072)(0.5)$ $i = \$223.78$
<p><b>Total Interest Earned in 1 year: _____</b></p> <p><b>Total Value of investment in 1 year _____</b></p> <p><b>Isn't this really compounded interest??!</b></p>	

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5. A bank offers **7.2 percent** interest compounded **semi-annually** on an investment option. You invest **\$6000.00** in this option for a term of **one year**.

a. How much **interest** will you earn on the investment after one year??

$$A = 6000 * \left(1 + \frac{0.072}{2}\right)^{1*2} =$$

$$A = P * \left(1 + \frac{r}{s}\right)^{n*s}$$

b. If you compare the interest earned in this investment with the interest earned on the investment in Question 4, what do you notice?

6. How much money would have to be invested now in order to amount to **\$6000** in three years if invested at **5 ¾ percent** compounded monthly?

7. How long will it take **\$4500** to double if invested at **8 ½ percent** compounded annually?

Using Tables you would this:

<b>Years</b>	<b>Begin Value</b>	<b>Interest Earned</b>	<b>End Value</b>
<b>1</b>	<b>\$4,500.00</b>		
<b>2</b>			
<b>3</b>			
<b>4</b>			
<b>5</b>			
<b>6</b>			
<b>7</b>			
<b>8</b>			
<b>9</b>			
<b>10</b>			