

**Interest and Finances – Practice**

Simple Interest:  $I = Prt$

<p>1. How much interest did I earn on a GIC that paid 3.75% interest over a 7 year period if I invested \$5000.</p>	<p>2. What principal did I invest if my Simple Interest account earned me \$2400 paying 6% interest over five years?</p>
<p>3. What is a better investment and by how much?</p> <p>Option 1: \$5500 at 7.5% for 3 years Option 2: \$6000 at 6% for 3 years</p>	<p>4. I invested \$12 000 at 9.5% interest but only had it locked in for 40 <i>weeks</i>. How much interest did I earn in that short period?</p>

Compound Interest:  $A = P \left(1 + \frac{r}{n}\right)^{n \cdot t}$

5. I had to borrow money to deal with some home renovations. I don't have to start paying it off for 3 years, but they are going to charge me 4.5% interest, compounded monthly. How much to I owe when my repayment starts, if I had to borrow \$17 000?

6. I received an inheritance of \$24 000 *and* was provided two options for investing.

Option 1: 7.5% interest, compounded weekly, for 5 years

Option 2: 7% interest, compounded daily, for 6 years

What is a better deal and by how much?

7. How much would I need to invest to have \$2 000 000 at the end of 20 years, if the savings account paid me 9% interest, compounded quarterly.

Credit Cards and Variable Annuities:

$$F = \frac{R\left[\left(1 + \frac{r}{n}\right)^{n \cdot t} - 1\right]}{\frac{r}{n}}$$

8. I have started a savings account for my son Atlas. I have it locked into an account that pays 8.5% interest for 15 years. I make monthly recurring payments of \$500. How much do I have at the end of the 15 years?

9. How much would I need to invest as a recurring payment if the interest rate was locked in at 9.75% if my goal was to have \$50 000 at the end of 10 years?

10. I have a credit card balance of \$1255, I was unable to pay anything more than \$250 and have to charge an additional \$300 last month. If the monthly interest 2.3% how much interest was I charged for the month and what will my new bill be?

Instalment Loans

11. I borrowed \$30 000 to pay off some debt from travelling and to buy a used car. The interest rate was locked in at 3.5% Simple Interest and I have 7 *years* to pay it off. What is the interest I will owe and what will my monthly payments be in order to pay it off in the 7 years?

12. I bought a new electric SUV and it cost me \$77 000. They charged me compound interest at 1.5% interest compounded monthly, and I have a 5 year repayment plan. How much do I owe with the interest included, and what will my bi-weekly payments be in order to pay it off in the 5 years?

