

Homework Questions...

3. Kyra has a Self-service Account at the Bank of Atlantic Canada with an opening balance of \$2150.23 for October. She made the following transactions in the month:

- full-service payment of \$250.42 for her utility bill
- payment by cheque of \$650.00 for her rent
- purchase of \$100.00 worth of traveller's cheques
- cash withdrawals of \$60.00 and \$20.00 at her local Bank of Atlantic Canada ATM
- cash withdrawal of \$100.00 at an ATM which was not a Bank of Atlantic Canada ATM; there was an additional \$1.50 charge on top of the Bank of Atlantic Canada service charge

not covered +1.00
not covered +1.00

+1.50
+1.50

- payments of \$102.24 and \$43.20 for groceries, \$50.00 for gas, and \$7.35 for lunch using her bank card
- payment for a new cycling jacket purchased online for \$99.95
- online payment of her phone bill of \$36.35

\$ 5.00

- What are the service charges for Kyra's transactions?
- What will Kyra's balance be at the end of the month?
- If Kyra makes a single deposit of \$800.00 this month, will she have to pay a monthly fee?

b)

2150.23	-	250.42	-	6
50	-	100	-	80
2.24	-	43.2	-	50
5	-	99.95	-	36.35
				5
				625.72

c)
+800 = 1425.72 ← Need 1500 PAY 10-90

**ACTIVITY 3.2
USING A BANK CARD**



In many cases, the fee for using an ATM may be included in your account package. However, your bank may charge a fee if you withdraw cash at an ATM operated by another financial institution. There could also be a service charge from the other financial institution. This means you will pay a fee to your own bank, plus a service charge to the other bank.

Working in a small group, answer the following questions.

1. Why is it best to use your bank card at a branch of your own bank?
2. Research and describe three advantages and disadvantages of bank card purchases.
3. Examine the receipt printed by a Bank of Atlantic Canada ATM after a transaction.
 - a) What important information is provided by an ATM receipt?
 - b) Why do you think the card number was printed this way?
 - c) Why is it a good idea to keep your ATM receipts?

SOLUTIONS

1. It is best to use your bank card at a branch of your own bank because you will not be charged a fee from another bank.
2. Advantages: you don't have to carry cash; your bank account is debited right away, so there are no future bills to pay; with care, bank cards are secure.

Disadvantages: there are sometimes fees for bank card transactions; it is easy to get carried away in your spending; sometimes merchants or other institutions do not accept bank cards; if you don't protect your personal information, your bank card can be subject to fraud.

3.
 - a) The ATM receipt shows that \$60.00 was withdrawn. It also shows the amount of money left in the account, and the date of the withdrawal.
 - b) The complete bank card number is not shown so that other people cannot get your personal information if you lose the receipt.
 - c) It is a good idea to keep your ATM receipts as a record of your transactions and to avoid someone using the information to commit fraud.

Simple and Compound Interest



MATH ON THE JOB

One day you might find Andrea Thiveos decorating a home for a wedding reception, while the next day, you could find her choosing a new colour scheme for a real estate office. Andrea is an interior decorator and a certified home stager, staging professional, and colour consultant. She puts her education and skills to work operating her own business, Roomscaping by Andrea. Andrea grew up in Happy Adventure, Newfoundland.

Andrea's job skills include completing mathematical calculations. When estimating the size of a room or piece of furniture, Andrea calculates its square footage or surface area. She also measures fabric, estimates quotes for different jobs, and does the accounting for her business.

A self-employed entrepreneur might take out a loan to help start up a new business and cover the costs of materials and equipment. If Andrea took out a loan to help cover her costs she would need to calculate the total cost of the loan with interest. This would help her keep track of her expenses. If Andrea took out a loan of \$20 000.00 and repaid it by making 12 monthly payments of \$1698.43, what would be the total cost of her loan?



Andrea's job involves artfully and tastefully combining colours.

SOLUTION

Multiply the amount of the monthly payment by 12.

$$\$1698.43 \times 12 = \$20\,381.16$$

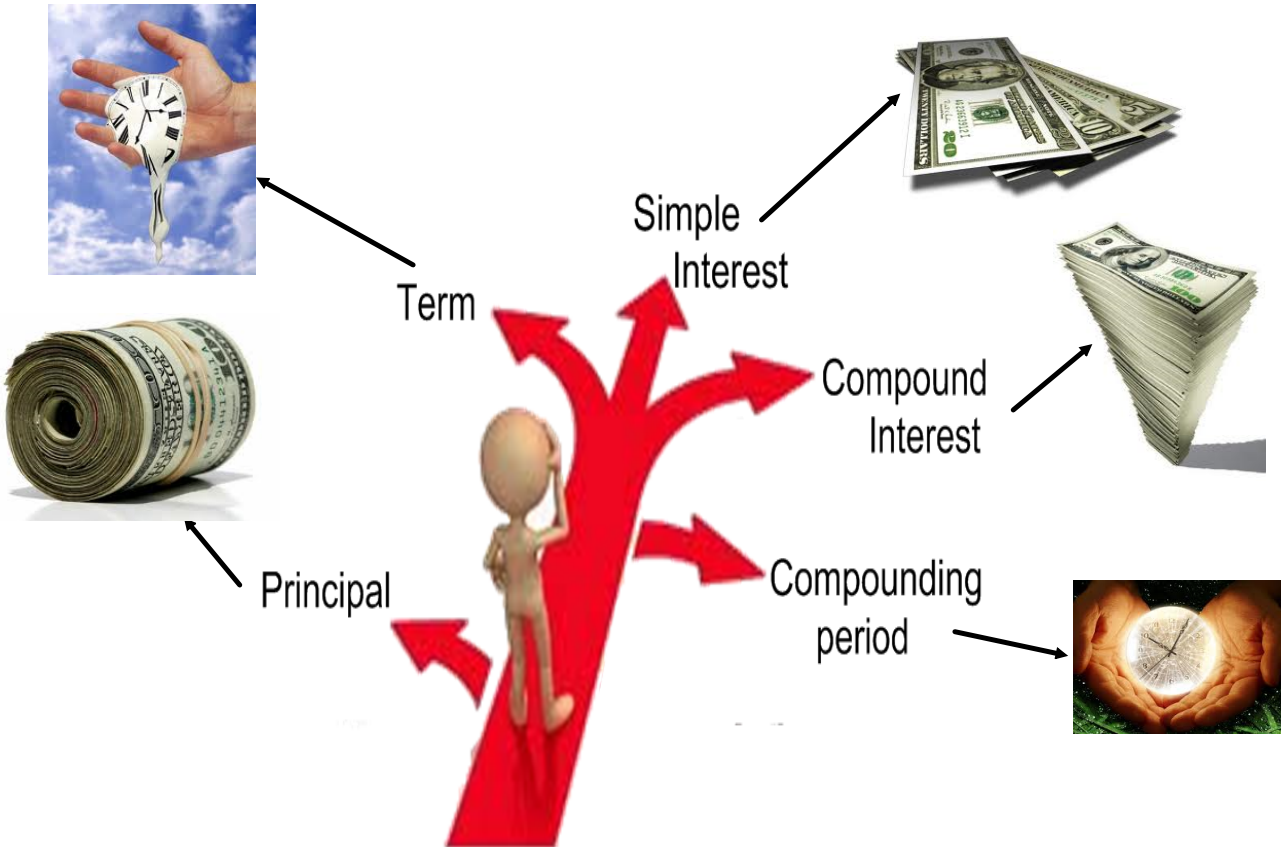
The total cost of the loan would be \$20 381.16.

INTEREST???

- **What is Interest?**
Money that is added to an investment/loan.
- **Investments (money is earned)**
"Good interest"
 - **savings account** (very, very small interest)
 - **RRSP** (registered retirement savings plan)
 - **RESP** (registered educational savings plan)
 - **Canada Savings Bonds**
 - **GIC's** (guaranteed investment certificate)
 - **Tax Free Savings Accounts**
 - **Mutual Funds**
 - **Stock Market (no interest, shares)**
- **Loans (money owed)**
"Bad Interest"
 - **banks** (line of credit, personal loans, mortgage)
 - **business/stores**
 - **credit cards**

INTEREST - What is a good # ?

- **bank: 7-10 %**
- **business: 14 - 20%**
- **credit card (9 - 25 %)**



SIMPLE Interest

Based on the **principal** (original amount) that is invested/borrowed. Interest is a certain percentage per **annum** (year). Often used for personal loans and short-term investments. The length of time for the investment/loan is called the **term**.

Interest = Principal x rate x time

$$I = Prt$$

&

$$A = P + I$$

- I - interest earned
- P - principal (original investment/loan)
- r - interest rate as a percent (change to a decimal)
- t - is **ALWAYS** time in years
(how long the money is invested/borrowed)
- A - amount of money including interest

EXAMPLE #1:

You just won 2.5 million from Saturday's 649 lottery. The bank has offered you a simple interest rate of 1.75 %/a. How much interest will you earn in one year?

$$I = Prt$$

$$I = (2\,500\,000)(0.0175)(1)$$

$$I = \$43\,750.00$$

EXAMPLE #2: You borrowed \$500 from your older brother who charges 4.5 % per annum. How much will you owe him after 2 years?



$$I = Prt$$

$$I = (500)(0.045)(2)$$

$$I = \$45$$

$$A = P + I$$

$$A = 500 + 45$$

$$A = \$545$$

EXAMPLE #3:

Betty-Ann's bank offers a simple interest rate of 4% per annum. How much interest would Betty-Ann earn on her investment of \$4000 after 8 months.

$$I = Prt$$

$$I = 4000 (0.04) (8/12)$$

$$I = \$106.67$$



Time

$I = P r t$ must be in years

$A = P + I$

Interest earned $\frac{I}{P t} = r$

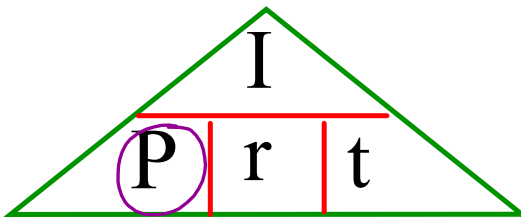
Amount

$r = \frac{I}{P t}$

Rearranging???

EXAMPLE #4:

The interest earned on a deposit is \$25 with an interest rate is 6% per annum. If the money was invested for 2 years, what is the principal?



$$P = \frac{I}{rt}$$

$$P = \frac{25}{0.06(2)}$$

$$P = 208.33$$

HOMework...

Worksheet - Simple Interest.pdf



Attachments

Worksheet - Simple Interest.pdf