HW ???   3.2 Build Your Skills Detaild Solutions.pdf

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

5. A deposit of $1200.00 is invested at 2.60% per annum, compounded semi annually, for 2 years.

$2 \times 2 = 4$

a) Explain why there are four interest periods.

b) Calculate the interest earned and the investment value at the end of each interest period.

c) What is the value of the investment at the end of 2 years?

d) Calculate the interest earned over the 2 years.

b) $I = Prt$

6 months
$= 1200(0.026)\left(\frac{6}{12}\right)$
$I = \$15.60$
$A = 1200 + 15.60$
$A = 1215.60$

1 year
$I = 215.60(0.026)\left(\frac{6}{12}\right)$
$I = 15.80$
$A = 1215.60 + 15.80$
$A = 1231.40$

1.5 years
$I = 1231.40(0.026)\left(\frac{6}{12}\right)$
$I = 16.01$
$A = 1231.40 + 16.01$
$A = 1247.41$

2 years
$I = 1247.41(0.026)\left(\frac{6}{12}\right)$
$I = 16.22$
$A = 1247.41 + 16.22$
1263.63

c)
```
1200(1+0.026/2)^
4
          1263.62738
```

d) $I = 1263.63$
$- 1200$

$I = \$63.63$

b d) $3560.00 at 1.20% per annum, compounded monthly for three months.

$$A = 3560\left(1 + \frac{0.0120}{12}\right)^{3}$$

nt

$n = 12$

$t = \dfrac{3}{12}$

$nt = 12\left(\dfrac{3}{12}\right) = 3$

```
3560(1+0.012/12)
^3
         3570.690684
■
```

Notes - Credit Cards.pdf

PAYMENT PLANS...

- **credit** - an agreement in which a borrower receives something of value, and agrees to pay for it later.

  ex: Leon's - "Don't Pay a Cent Until 2017!"

- **finance charge** - the total amount of interest paid to borrow a sum of money or use a payment plan.

- **credit cards** - issued by banks, department stores and gas stations.
  - if balance is not paid by due date, interest is charged on the remaining balance AND any new purchases made before the next statement date.
  - how the interest is calculated varies (read the fine print!)
  - must be 18 years of age in order to apply.

DISCUSS THE IDEAS

USING A CREDIT CARD

T Working in a small group, brainstorm answers to the following questions. You can research the questions online.

1. Make a list of three available credit cards.

2. What is a minimum payment? Find an example showing how it is calculated.

3. What is a credit limit? Why do you think different people have different credit limits?

4. Research the differences between a store credit card and a credit card available from a bank. Compare the interest rates and annual fees charged by one store card and one credit card offered by a bank.

5. Name one advantage and one disadvantage of using a credit card.

SOLUTIONS

1. Answers will vary. Possible answers include: American Express, Visa, MasterCard, Hbc (Hudson's Bay Company/The Bay), Shell Oil, Husky, Sears, Future Shop, Best Buy.

2. A minimum payment is the smallest monthly amount you have to pay on your credit card account.

3. The credit limit is the maximum amount of credit that the credit card company will allow you to use. It is a spending limit on your credit card. The credit card company will base your credit limit on how likely they think it is that you will be able to repay your credit. If you are able to pay off your bills quickly, they will give you a higher credit limit.

4. Bank credit cards and store credit cards are very similar. Often stores offer discounts if their credit card is used. It's easier to qualify for a store card than a bank card. Store cards can only be used in branches of that store. Bank credit cards are more universally accepted throughout the world. The interest rates on store cards are often higher than on bank cards.

   Answers will vary. Possible answers include:

   • Bank of Montreal (BMO) MasterCard No Fee Air Miles card; no annual fee; 19.50% interest rate.

   • Hbc Credit Card; no annual fee; 28.80% interest rate.

5. Advantages of using a credit card: convenient; fits into your wallet easily; don't have to carry cash; don't have to pay straight away; some credit cards have consumer insurance; some credit cards have air miles or other benefits; build your credit rating if you pay your bill regularly.

   Disadvantages: If you don't pay off your full credit card bill each month, you pay interest on the unpaid balance; interest rates are high; some credit cards charge fees; it is easy to get into debt and hard to get out of debt.

CASH ADVANCES FROM CREDIT CARDS

- **cash advance** - withdrawal of cash from an ATM or bank teller charged to a credit card.
 - interest is calculated from the day of withdrawal.

Example 1   www.easycalculation.com/simple-interest.php

On January 12, John charges a **cash advance** of $500.00 to his credit card. This withdrawal appears on his monthly statement issued January 27. John does not pay off this amount by the due date shown on his statement. The next monthly statement is issued on February 27. John's bank charges 18.00% annual interest for cash advances starting on the day of the withdrawal.

Calculate the interest that John is charged for the January 12 cash advance.

SOLUTION

Count the number of days from January 12 to February 27, including January 12.

There are 20 days left in January and 27 days in February.

   20 + 27 = 47 days

The annual interest rate for cash advances is 18.00%. Convert the percentage to a decimal.

   18.00 ÷ 100 = 0.18

Calculate the interest charged for 47 days.

$$I = Prt$$

$$I = \$500.00 \times 0.18 \times (47 \div 365)$$

$$I \approx \$11.59$$

John is charged $11.59 in interest for the cash advance.

$I = Prt$

$I = 500(0.18)(47/365)$

$I = 11.59$

Example 2

Jane is charged 19.50% per annum on her credit card balances. She uses her credit card, which has no previous balance, to purchase a new wood stove that costs $2100.36. Her next credit card statement is dated September 30 and she pays only the minimum payment (5% of her balance).

3 days

On October 5, Jane makes another purchase of $450.00 with her credit card.

How much money will Jane owe on October 7? She makes no other purchases with her credit card.

2100.36
− 105.02
1995.34   7 days

Min = 0.05 (2100.36)
= 105.02

SOLUTION

First calculate Jane's minimum payment.

0.05 × $2100.36 = $105.02

Jane's unpaid balance on September 30 is her total purchases minus her payment.

$2100.36 − $105.02 = $1995.34

Because Jane has an unpaid balance, daily interest is charged on the balance beginning on October 1. Calculate how much interest she will accumulate on the unpaid balance over 7 days (October 1–7).

$I = Prt$

$I = \$1995.34 \times 0.1950 \times (7 \div 365)$

$I = \$7.46$

Because she didn't pay her credit card bill in full, Jane will have to pay daily interest on any new purchases beginning immediately. Calculate how much interest she will accumulate on the new purchase of $450.00 over 3 days (October 5–7).

$I = Prt$

$I = \$450.00 \times 0.1950 \times (3 \div 365)$

$I = \$0.72$

Add the two interest amounts plus the unpaid balance.

$7.46 + $0.72 + $1995.34 = $2003.52   *+ 450 = $2453.52*

As of October 7, Jane will owe $2003.52.

ACTIVITY 3.7
UNDERSTANDING CREDIT CARD STATEMENTS

Activity - Credit Card Statement.pdf

Laurie works for a company that makes customized granite counters and floors in Moncton, NB. She recently travelled to Labrador to meet with the Torngait Ujaganniavingit Corporation, which mines blue eye stone from the Ten Mile Bay Quarry on Paul Island. When she travels, she usually puts her expenses on her credit card. Her credit card company sends her a statement each month with the following explanation of terms on the back of the statement:

- The previous balance is the amount you owed from the previous month. $1428
  −1428
  $0
- The payment is the amount you paid on the previous month's bill.
- The unpaid balance is how much you still owe from last month's bill.
- The interest is calculated on the unpaid balance for the number of days from the last statement to this current statement.
- The new balance is the amount you owe for the current month. $2211.52
- The new balance is the unpaid balance plus interest plus purchases.
- The unpaid balance is the previous balance less any payments.
- The minimum payment is 5% of the new balance or $10.00, whichever is greater. $110.58 = 0.05(2211.52)
- The credit available is the credit limit less the new balance.   3288.48

Blue eyes, also known as Labradorite, is mined primarily on Paul Island, NL, and is prized around the world for its beauty. It is the official provincial stone of Newfoundland and Labrador.

Use Laurie's credit card statement to answer these questions.

1. What was the previous balance on Laurie's credit card? $1428
2. The payment is shown as −$1428.00. Why is it a negative number?   Paid
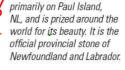3. How was the value of $2211.52 calculated for the purchases?
4. Did Laurie have to pay any interest in March? Explain.   Purchases & unpaid balance   NO
5. How was the minimum payment calculated?   0.05(2211.52)
6. What payment will she have to make on or before April 28 so that she does not have to pay interest? Explain.   2211.52
7. How is the available credit calculated?   Credit limit − Balance

Bank of **ATLANTIC CANADA**		Customer Name:	Laurie Smith
		Card Number:	999 8888 7777 1234
		Statement Date:	April 2, 2011
		Previous Statement:	March 2, 2011

Transaction date	Posting date	Activity description	Amount ($)
PREVIOUS STATEMENT BALANCE			$1428.00
Mar 4	Mar 5	PAYMENT – THANK YOU	−$1428.00
Mar 4	Mar 5	Flights Canada	$1676.19
Mar 4	Mar 5	Sleep Well Hotel St. John	$223.59
Mar 4	Mar 5	Sushi St. John	$63.79
Mar 5	Mar 6	Gas Moncton	$55.00
Apr 1	Apr 2	Best Save Foods Moncton	$135.45
Apr 1	Apr 2	Quality Books	$57.50

Payment information		Calculating your balance	
Minimum payment	$110.58	Previous balance	$1428.00
Payment due date	Apr 28	Payments & credits	−$1428.00
Credit limit	$5500.00	Purchases	$2211.52
Available credit	$3288.48	Cash advances	$0.00
Annual interest rate	18.50%	Interest	$0.00
		Other fees	$0.00
		NEW BALANCE	$2211.52

SOLUTIONS

1. The previous balance on Laurie's credit card was $1428.00.

2. Laurie's payment of her previous balance was marked as a negative number because $1428.00 was subtracted from the previous balance.

3. The value of purchases ($2211.52) was calculated by adding up all the purchases detailed in column 4.

4. No, Laurie did not have to pay interest in March because she had no outstanding balance. You only pay interest on your previous balance if you do not pay in full by the payment due date.

5. The minimum payment is calculated by taking 5% of $2211.52.

   $0.05 \times \$2211.52 = \$110.58$

6. Laurie will have to pay $2211.52 in April in order to avoid paying interest. If she pays off her current balance, she will have a zero balance and will not have to pay interest.

7. Available credit is calculated by subtracting the new balance from the credit limit.

DISCUSS THE IDEAS

MANAGING CREDIT AND DEBT

Credit cards can be convenient. Instead of carrying around large amounts of cash, you can just carry with you a little piece of plastic. With that little piece of plastic, you can pay for everything from groceries and gas to gifts, electronics, and even vacations.

However, if you don't have the money to pay off your debt right away, the high interest rates on these loans can lead to serious financial problems. Large unpaid credit card debts can be difficult to pay off. This is especially true if you suddenly find yourself unable to work or face a large unexpected expense.

1. What are some long-term consequences of having too much debt?

2. If you find yourself accumulating debt, what are some options for paying down the money you owe?

DID YOU KNOW???

Credit card debt is a major problem in Canada. In September 2009, outstanding credit card debt reached $78 billion in Canada (Toronto Star, December 2009, quoting Equifax Canada). In 2009, there were 4.5 bankruptcies per 1000 people aged 18 and older in Canada, up from 3.2 in 2000 (Office of the Superintendent of Bankruptcy Canada).

SOLUTIONS

1. Answers will vary. Some long-term consequences of having too much debt include:

   - Because of compounding interest, if you can't pay your bills you will accumulate even more debt and may never be able to pay off what you owe.

   - You may not be able to rent housing. Landlords will often check your credit history before renting to you.

   - You may not get a job or promotion. Some employers check your credit history before hiring or giving promotions.

   - It might cost more for you to get insurance. Insurance companies sometimes check your credit history before setting your insurance rate.

   - If you don't pay your bills, credit card companies can raise your interest rates. If you try to get a new loan or credit card, the company will offer you a higher interest rate.

   - Your creditors may have your wages garnished in order to receive their payments. This means part of your paycheque will be paid directly to your creditors.

2. Answers will vary. Some ways of reducing accumulated debt include:

   - Reduce your spending. Prioritize your expenses and look for ways to save money. Use your savings to start paying back your debt.

   - When you do have money to put towards debt, use it to pay off loans or bills with the highest interest rates first.

   - Stop using credit cards, which have high interest rates. If you need to borrow money, try to use other loans that have lower interest rates.

   - Contact your lenders and negotiate lower interest rates.

   - Track your spending. In order to reduce your debt, you need to have a clear picture of where your money is going.

   - If you are unable to repay your debt through any other means, the last resort is to file for bankruptcy. There are serious consequences to bankruptcy.

Information about credit counselling can be found at the following websites:

http://www.creditcounsellingcanada.ca/

http://www.nomoredebts.org/

Credit counselling agencies offer the following services:

- Credit counselling: they will review your budget and help you manage your personal finances.

- Debt consolidation: they will contact your creditors to establish payment plans and negotiate reduced interest rates on your debts.

- Financial education: they provide resources and expertise on healthy money management.

ACTIVITY 3.9
BUY NOW! NO DOWN PAYMENT REQUIRED!

Stores frequently advertise special deals to entice consumers to buy. Remember to always compare prices with other stores, and always read the fine print to see whether there are added costs such as delivery and administration charges. Assess the final cost of the item and your financial situation so you can make the decision that best meets your needs.

The sales promotions below are for the same flat-screen TV offered by three different stores.

1. What is the overall price for each option?

2. Which of these options has the best overall price?

3. What are the advantages and disadvantages of each option?

down payment: a partial payment sometimes required at the time of purchase

Free Delivery!
with cash purchase of $1245.65.

OPTION 1

Our Buy Now, Pay Later Plan
for $1500.00 with no interest payments for 1 year.

Delivery charge $35.00 and Administration fee of $75.00 to be paid at the time of sale. Interest of 12.00% per annum will be charged for non-payment 365 days after purchase.

OPTION 2

Buy with our in-store loan
$0 down payment
and 24 monthly payments of $70.00

Delivery charge of $35.00 and an administration fee of $75.00 are added to the purchase price and are included in the monthly payments.

OPTION 3

SOLUTIONS

1. Calculate the total cost for each option.

   Option 1: $1245.65

   Option 2: $1500.00 + $35.00 + $75.00 = $1610.00

   Option 3: $24 \times $70.00 = $1680.00

2. Option 1, cash payment, is the least expensive payment option.

3. Answers will vary. Advantages and disadvantages of each option might include the following.

   Option 1: cheapest, but you need all the cash right now.

   Option 2: you can have the TV immediately. You only have to pay $110.00 up front. But you have to come up with $1500.00 before 365 days have passed or get charged 12.00% interest.

   Option 3: The most expensive but with affordable monthly payments. $0 to pay up front.

HOMEWORK...

Page 124 Questions #1 - 7, 9

Worksheet - Credit Cards and Store Promotions.pdf

3.3 Build Your Skills Detailed Solutions

Attachments

3.2 Build Your Skills Detaild Solutions.pdf

Notes - Credit Cards.pdf

Activity - Credit Card Statement.pdf

3.3 - Credit Cards and Store Promotions.pdf

Worksheet - Credit Cards and Store Promotions.pdf