

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

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

## **MBF3C – College Mathematics**

### **Managing Finances Assignment – Buying on Credit**

You are planning to make a big purchase using a new credit card you received. But you have decided not pay off the credit card balance when the monthly statement arrives. As a result there is the consequence of interest the credit card company will charge you each month until the balance or amount owing is paid. You will assess the interest and outstanding balance owing to the credit card company if you make no payments compared to making the minimum monthly payment.

Task:

#### **1. Research and Choose a credit card:**

Go to any of the major bank websites and research credit cards to choose from.

- Royal Bank of Canada, RBC
- Canadian Imperial Bank of Commerce, CIBC
- Toronto Dominion Bank, TD bank
- Bank of Montreal, BMO

Research at least 3 credit card offerings. These could be from the same bank or different banks. Many banks offer Student Credit Cards.

Use the attached template to organize the credit card information.

Pay attention to

- Annual Fee
- Interest Rate
- Grace period (the amount of time allowed to pay back)
- Minimum monthly payment
- Benefits or perks

Choose the card that best suits your needs from the summary list.

#### **2. Choose a purchase you would like to make:**

- Vacation
- New technology – computer built from parts
- Used car from a dealership
- See your teacher to approve another type of purchase

Use the attached template to make a list of the charges that you will incur in making the purchase.

You need to give this some thought to create a comprehensive list. You do not want surprise costs.

Determine the total cost for the entire purchase that will be charged to your credit card.

#### **3. Interest calculations**

a) Calculate the interest you will owe when you do not pay back the balance or amount owing for the next 3 months using the formulas learned in class. Assume a monthly compounding period.

Use the attached template.

b) Calculate the total interest for the 3 months assuming you only make the minimum payment. Use the attached template for this

#### **4. Choose any 4 of the following questions to answer. Answer in your own words and provide the source of your information if you used a website to help you.**

- a) Why did you choose your particular credit card over the other card options? Justify your response.
- b) Why would anyone pay an annual fee to use a credit card? Give examples in your answer.
- c) What are the consequences of delaying credit card payments? Consider all financial aspects.
- d) Who benefits the most from credit cards? Give reasons for your answer.
- e) Should everyone have a credit card? Justify your answer.
- f) Your best friend just received a credit card and is excited. What advice would you give him/her about financial responsibility?

#### **5. Provide details on your purchase. Example: place, activities you intend to do etc.**

#### **6. Provide references or websites used to help you answer questions.**

#### **7. Refer to the rubric and checklist for evaluation of the assignment.**

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**Notes:**

Do research on the internet, newspapers, discussion with family members.

You must answer the questions to #4 in your own words and provide references or the sources of information you used.

You have a choice of the type of purchase and the credit card you will be using.

The TVM solver in the graphing calculators may be used to validate calculations. If you use these calculators provide snapshots of the screen.

Checklist

- I have identified my purchase.
- I have created a list of all associated expenses towards the purchase.
- I have determined a cost for each expense.
- I have calculated the total cost of the purchase including taxes.
  
- I have researched at least 3 credit cards from the major banks.
- I have summarized the credit card information in the template.
- I have chosen a credit card and provided a reason for my decision.
  
- I have completed the template for the interest and balance owing.
- I have shown the calculations for the total interest paid for 3 months if I make no payments.
- I have shown the calculations for the total interest paid for 3 months if I only make the **minimum** payment each month.
  
- I have answered the questions on Credit card use.

Assessment Rubric

EVALUATIVE CRITERIA	IDEAS	CONNECTIONS	EXTENSIONS
<b>Core content and concepts</b>	Completes basic calculations for Compound interest using the appropriate calculations. Defines, explains, and illustrates the concepts for compound interest	Applies concepts from investments to loans using compound interest formula.	Connects concepts to other subject areas.
<b>Reasoning and applications</b>	Makes valid observations based on research Records data using drawings, charts, or graphs	Provides elaborate reasons on the use of credit cards based on available data	Validates thinking with justified reasoning and/or appropriate calculations
<b>Communication</b>	Provides information on credit cards researched Provides information on the purchases and associated expenses Uses mathematical terms, notations, and symbols to communicate ideas	Links representations to information via tables, graphs, and symbols	
<b>Problem solving</b>	Clarifies the task Selects relevant information Approaches the problem with reason Organizes information using tables, models, or patterns	Applies explicit strategies (estimation, algorithms, working backwards, modeling) Selects an appropriate strategy to develop a solution	Makes observations or generalizations based on the results.

Evaluation will be based on the following Marking criteria

80-100% 2 connections 1 extension

70-80% 3 connections made

60-70% 2 connections 2 ideas

50-60% 3 ideas



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3. Interest calculations - use the back side of the page to show your work

a) Delayed payments making no payments

Month	Unpaid balance	Interest	New balance

Total Interest for the 3 months =

b) Delayed payments making minimum payment

Month	Unpaid balance	Interest	Payment made	New balance

Total Interest paid for the 3 months =

How much more interest is paid in part (a) than part (b)

4. Answers to Credit Card usage questions (use a separate page)

5. Details on the purchase (use a separate page)

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