


Worksheet 7-5: Credit Cards

Using a credit card allows you to buy items without paying for them immediately. A credit card is considered as a way of borrowing money for a short period of time. Interest rates charged on credit card accounts are often much greater than the interest rates paid on savings accounts.

Most credit cards compound interest daily on overdue accounts. An overdue account is an account with a balance that remains unpaid after the due date has passed. If the balance is paid in full by the due date, no interest is charged during the grace period, the period of days during which no interest is charged. However, if the balance is not paid in full by the due date, interest will be charged and compounded daily since the dates on which the purchases take place.

Some credit card companies offer incentives or rewards to customers for using the card to make purchases.

To answer questions 1-5, refer to Mia's credit card statement.

 <b>Crownbank</b>	<b>Credit Card</b> STATEMENT														
Mia Bailey 17 Seaside Road Hometown, ON M3R 4C2	<table> <tr> <td>Credit Limit:</td> <td>\$8000</td> </tr> <tr> <td>Annual Interest Rate:</td> <td>12.9%</td> </tr> <tr> <td>Daily ABM Cash Advance Limit:</td> <td>\$500</td> </tr> <tr> <td>Annual Interest Rate on Cash Advances:</td> <td>18.9%</td> </tr> <tr> <td>Annual Fee:</td> <td>\$12</td> </tr> <tr> <td>Grace Period:</td> <td>21 days</td> </tr> <tr> <td>Minimum Payment:</td> <td>greater of \$10 or 3% of balance</td> </tr> </table>	Credit Limit:	\$8000	Annual Interest Rate:	12.9%	Daily ABM Cash Advance Limit:	\$500	Annual Interest Rate on Cash Advances:	18.9%	Annual Fee:	\$12	Grace Period:	21 days	Minimum Payment:	greater of \$10 or 3% of balance
Credit Limit:	\$8000														
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Daily ABM Cash Advance Limit:	\$500														
Annual Interest Rate on Cash Advances:	18.9%														
Annual Fee:	\$12														
Grace Period:	21 days														
Minimum Payment:	greater of \$10 or 3% of balance														
Interest is compounded daily															

1. A statement is issued to Mia on the 18<sup>th</sup> of each month. What is the due date for: *28 days*
- (a) the January 18 statement?                      (b) the February 18 statement?

*February 8 (yes you count.)                      March 11*


2. Mia's December statement has a balance of \$289.40. Determine the minimum monthly payment.

$$289.40 \times 3\% \text{ or } 289.40 \times 0.03$$

$$= 8.68$$

*'∴ \$8.68 is less than \$10. The minimum payment is \$10.*

To answer questions 1-5, refer to Mia's credit card statement.

 <b>Crownbank</b>  Mia Bailey 17 Seaside Road Hometown, ON M3R 4C2	<b>Credit Card</b> STATEMENT	
	Credit Limit: \$8000 Annual Interest Rate: 12.9% ✓ Daily ABM Cash Advance Limit: \$500 Annual Interest Rate on Cash Advances: 18.9% ✓	
	Annual Fee: \$12 Grace Period: 21 days Minimum Payment: greater of \$10 or 3% of balance	
Interest is compounded daily		

3. After using her credit card for all her holiday shopping, Mia's January statement has a balance of \$1220.74. Determine the minimum monthly payment.

$$1220.74 \times 0.03$$

$$=$$

4. Explain one advantage and one disadvantage of Mia using her credit card to make all her holiday purchases.

Advantage → carry less cash  
 fewer transactions → less (withdrawals) bank charges

Disadvantage → overspend and buy things you can't afford

5. Determine each daily interest rate charged on Mia's credit card. Express each answer as a percent and as a decimal rounded to six decimal places.

(a) on cash advances (cash withdrawal)

(b) on credit card purchases

$$i \text{ in } \% = \frac{18.9}{365}$$

$$= 0.05178\%$$

$$= 0.000518$$

$$i \text{ in } \% = \frac{12.9}{365}$$

$$= 0.0353425\%$$

$$= 0.000353$$



7. Ray decides to apply for a credit card. His parents have to co-sign his application – that is, they agree to pay the outstanding balance if Ray cannot or will not pay. On the application, they indicate that they want a spending limit of \$250. A portion of Ray’s first credit card statement is shown.

Crownbank		Credit Card STATEMENT	
STATEMENT FROM June 25 to July 26			
7/2	The Jeans Factory		48.00
7/7	T-shirt Haus		22.75
7/22	Soccer Unlimited		28.49
Previous Balance:	0.00	New Balance:	?
Payments:	0.00	Minimum Due:	?
Overdue Balance:	0.00	Statement Date:	July 26
Interest Charged:	0.00	Annual Interest Rate:	16.9%
New Purchases:	?	Available Credit:	

- (a) Calculate the amount of the new purchases made this month and Ray’s new balance.

$$\begin{aligned} \text{New Purchases} &= 48 + 22.75 + 28.49 \\ &= 99.24 \end{aligned}$$

$$\text{New balance} = \text{New Purchases} = \$99.24$$

Previous Balance + New Balance

- (b) If the minimum payment is \$10 or 3% of the balance, whichever is greater, determine Ray’s minimum payment.

$$\begin{aligned} 99.24 \times 0.03 \\ = 2.98 < 10 \end{aligned}$$

Minimum payment is \$10.

- (c) Determine the due date if the payment is due 21 days after the statement date.

August 16

- (d) Four days after he received the statement, Ray went online and paid the balance.

- (i) What is the daily interest rate?

$$\begin{aligned} i &= \frac{0.169}{365} \\ &= 0.00046 \\ &= 0.046\% \end{aligned}$$

- (ii) How much interest was he charged?

\$0