Interest: Borrowing Money

Ingrid has just completed an outdoor photography course online. She plans to become a professional photographer. She needs to borrow money to buy equipment. Ingrid wants to borrow at the lowest interest rate possible.

A. What ways of borrowing money do you know?

e.g., credit cards, borrowing money from my parents/friends, bank loans, mortgage, line of credit

B. How might Ingrid borrow at the lowest rate possible?

e.g., borrowing money from her parents, since they may not charge interest or they may charge a low interest; loan from the bank, because they promise to have a lower interest rate than the lowest advertised rate

5

Getting Started

1. Complete the chart.

Percent	Decimal
21%	0.21
3.75%	0.0375

2. Evaluate to the nearest cent.

a) 5.5% of $90

$= \underline{0.055 \times \$90}$

$= \underline{\$4.95}$

b) 0.9% of $850

$= \underline{0.009 \times \$850}$

$= \underline{\$7.65}$

3. Evaluate.

> **Hint**
> When working with money, round to the nearest cent after you have made the final calculation.

a) 250 + (3% of 250)

$= \underline{250 + 7.5}$

$= \underline{257.5}$

b) $1500 + (8.5% of $1500)

$= \underline{\$1500 + 127.50}$

$= \underline{\$1627.50}$

4. Complete the chart for interest compounded daily.

Principal (P)	Annual interest rate	Time	Amount $A = P(1 + i)^n$	Interest $I = A - P$
$1100	1.55%	365 d	$A = \$1100\left(1 + \frac{0.0155}{365}\right)^{365}$ $\doteq \$1117.18$	$I = \$1117.18 - \$1100$ $= \$17.18$
$14 500	1.95%	90 d	$A = \$14\,500\left(1 + \frac{0.0195}{365}\right)^{90}$ $\doteq \$14\,569.89$	$I = \$14\,569.89 - \$14\,500$ $= \$69.89$
$600	2.1%	180 d	$A = \$600\left(1 + \frac{0.021}{365}\right)^{180}$ $\doteq \$606.25$	$I = \$606.25 - \$600$ $= \$6.25$
$3250	0.8%	270 d	$A = \$3250\left(1 + \frac{0.008}{365}\right)^{270}$ $\doteq \$3269.29$	$I = \$3269.29 - \$3250$ $= \$19.29$

5. a) Eric and Kay each invest $14 500 at 1.95%/yr for 90 d. Eric earns simple interest. Kay earns interest compounded daily. How much interest does each person earn?

Eric: $I = Prt$

$$= (\$14\,500)(0.0195)\left(\frac{90}{365}\right), \text{ or } \$69.719...$$

Eric earns $69.72 in interest.

Kay: $A = P(1 + i)^n$

$$= \$14\,500\left(1 + \frac{0.0195}{365}\right)^{90}, \text{ or } \$14\,569.885...$$

$$I = \$14\,569.885... - \$14\,500, \text{ or } \$69.885...$$

Kay earns $69.89 in interest.

b) Why did Kay earn more interest than Eric?

e.g., Compounding earns money on the principal and on the interest.

6. Each year, Kathy spends about $4000 at a local store. The store offers two membership plans:
- Plan A: Pay $45 and get no discount on any purchases.
- Plan B: Pay $100 and get a 2% discount on all purchases.

Which plan should Kathy choose? Explain.

e.g., 2% of $4000 = $80.00 $100 − $80 = $20

Kathy should choose Plan B. e.g., If she spends $4000 a year, she will get $80 in discounts. So her membership will cost $20. This is less than $45.

7. Damien has a job as a nature guide near Prince George. He is buying $200 worth of fishing tackle. Today, if you buy $250 worth of tackle, the store will reduce the price by 25%.

Will Damien save money if he spends another $50? Explain.

$250 − __25__ % of $250 = $ _187.50_

Yes. e.g., If Damien buys $250 worth of fishing tackle, he will spend only $187.50. This is less than $200.
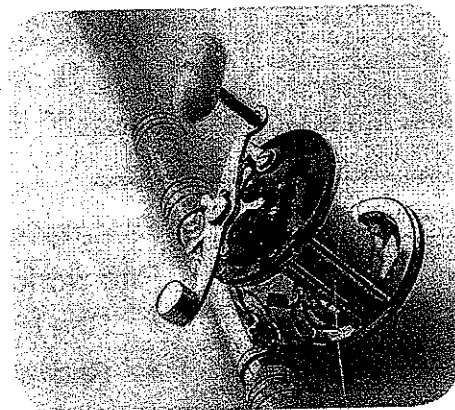
Practice

1. Match each person with the credit card you suggest.

Person

Stephen is a contractor who shops mainly at the local home improvement store.

Claudine has never had a credit card. She does not have a job. She wants a credit card so she can build credit.

Shantel is a cashier. She wants a credit card for occasional purchases and emergencies.

Card

standard

limited purpose

secured

2. Jack is a sales manager in Brandon. He wants to give each sales agent a credit card. He researched this information.

Card	APR	Grace period	Rewards
VISA	19.75%	21 d	yes
American Express	30.00%	28–31 d, depending on number of days in month	yes
MasterCard	19.97%	21 d	yes

a) What other information should Jack collect?

e.g., types of rewards, if balance revolves, if there is a credit limit, if there is a fee, if a security deposit is required

> **Hint**
> Use the charts inside the back cover.

b) On a MasterCard, interest is compounded daily. What interest is owed on a balance of $1500 that is 60 d overdue?

$A = \$1500\left(1 + \frac{0.1997}{365}\right)^{60}$ $I = \$1550.044... - \$1500$

$= \$1550.044...$ $= \$50.044...$

The interest owed is $50.04.

c) Do you think it is useful to know the grace period? Explain.

Yes. e.g., To pay the balance on time, you need to know the grace period. If sales agents need to pay a bill and then be reimbursed, they need to know the grace period.

3. What do you think is an important credit card feature? Why?

e.g., The rewards are important. I would always pay on time. So the interest rate would not matter to me.

4. Sonia is a hair stylist. She wants to take a $500 course on hair styling. She needs to pay when she enrolls.
   - She would like to pay for the course before February 3.
   - She is paid on the 24th of every month.
   - Today is January 29. Her credit card issues a statement on the 2nd of each month. It has a 22-day grace period.

January						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

March						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

   a) Suppose Sonia pays for the course today on her credit card. When would be the last day she could pay without paying interest? **February 24**

   b) Suppose Sonia pays for the course on February 2. When would be the last day she could pay the balance without paying interest? **March 24**

   c) Should Sonia pay for the course on January 29 or wait until February 2? Explain.

   e.g., Sonia should pay for the course on February 2. That way she can pay the bill the day she receives it. She could use her March paycheque. The money from her February paycheque could have been invested for 22 d.

5. Jackson just started his first job as a welder in Langley. He wants to apply for a credit card. Circle the advantages of a credit card. Cross out the disadvantages.
   - (build credit)
   - (earn rewards)
   - (can use in case of emergency)
   - ~~lose track of money owing~~
   - ~~easy to spend more than you have~~
   - ~~easy to make unplanned purchases~~
   - (keep track of expenses)
   - ~~interest can grow large~~

6. Why might you choose a card with a higher interest rate?

   e.g., The card might have lower annual fees. If you pay the balance on time, the interest rate will not matter.

7. Why might you choose a card with an annual fee?

   e.g., The rewards might be more valuable than the cost of the annual fee.

8. Why is it wise to pay the full balance on a credit card?

   e.g., The fees and interest rates are high. If you only pay part of the balance each month, you pay a finance charge each month. It will take you a long time to repay your debt. Paying the full balance will give you a better credit rating.

Practice

1. Match each person with the loan you suggest.

Person

Greg starts his new job in 2 wk. He must borrow money to pay his rent. Greg has a good credit rating. He has never borrowed money.

Scotty is going to buy a $40 000 pickup truck for work. He has just bought a condominium with his savings.

Sharla has just paid her car loan. She wants a loan to pay for a vacation.

Brent is going to school to learn welding. He needs money for tuition.

Loan

unsecured personal loan

auto loan

student loan

secured personal loan

2. Jill is buying a new refrigerator. She cannot afford to pay cash. Should she use a credit card or get a personal loan? Justify your answer.

e.g., She should use a credit card if she can pay off the balance before the date the payment is due. OR She should use a personal loan if it will take longer to pay.

Hint
APR means annual percent rate.

3. Liam, a taxi driver in Revelstoke, wants to buy a new taxi. He was approved for the loans in this chart.

a) What should Liam think about when he chooses a loan?

Loan	APR	Fixed payments for
secured personal loan	5.5%	5 yr
auto loan	7.5%	7 yr

e.g., how long he will need to pay off the loan; what he can afford to pay each month; how long the taxi will last

b) Which loan should Liam choose? Explain why.

e.g., Liam should choose the secured personal loan, because it has a lower interest rate.

4. Hannah says that using payday loans and cash advances on credit cards are bad choices for borrowing money. Do you agree or disagree? Explain.

Agree. e.g., Interest is very high on payday loans and cash advances. The money may be needed for something else on payday and it might be difficult to pay the loan back quickly.

5. Kumal wants to sell her townhouse in Whitehorse. She will spend $2100 updating her home. She has $2100 in cash, but she plans to buy a $2100 RRSP. She will need 120 d to pay off any loan. Interest is compounded daily.

a) Complete the chart.

Option	Details	APR	Total amount $A = P(1 + i)^n$	Total interest $I = A - P$
secured personal loan	Buy the RRSP with $2100 cash. Pay for updating with the loan using her home equity as collateral.	3.75%	$A = \$2100\left(1 + \frac{0.0375}{365}\right)^{120}$ $\doteq \$2126.05$	$I = \$2126.05 - \$2100$ $= \$26.05$
RRSP loan	Pay for updating with the $2100. Buy an RRSP with an RRSP loan.	2.75%	$A = \$2100\left(1 + \frac{0.0275}{365}\right)^{120}$ $\doteq \$2119.07$	$I = \$2119.07 - \$2100$ $= \$19.07$
no loan	Pay for updating with the $2100. Do not get an RRSP.	0%	no interest $= \$2100$	no interest
credit card	Buy an RRSP with the $2100. Pay for updating with a credit card with a 30 d grace period.	19.1%	$A = \$2100\left(1 + \frac{0.191}{365}\right)^{90}$ $\doteq \$2201.24$	$I = \$2201.24 - \$2100$ $= \$101.24$

b) Which option should Kumal choose? Explain why.

e.g., RRSP loan; Kumal can still buy an RRSP, which has a low interest rate. OR secured personal loan; Kumal can still get an RRSP, and the secured personal loan has a low interest rate.

c) Which option should Kumal not choose? Explain why.

e.g., no loan; Kumal should get an RRSP to save for retirement, and an RRSP would give her a tax refund. OR credit card; The interest rate is very high, resulting in the greatest borrowing costs.

d) Suppose Kumal uses a RRSP loan instead of her credit card. How much interest will she save?

$\$101.24 - \$19.07 = \$84.25$

She will save $84.25.

6. What is equity? What is it used for?

e.g., Equity is the difference between what an asset is worth and what is owed on it. It is often used as collateral on a loan.
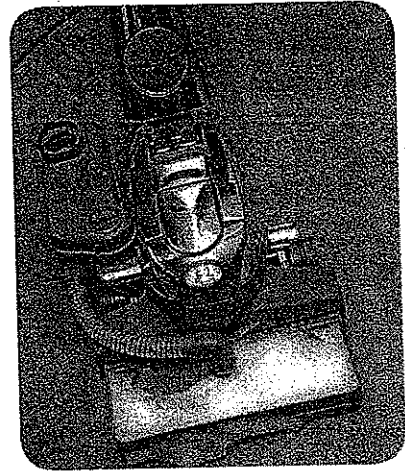
Example

Loretta wants to start a carpet-cleaning business.
- She needs a $4000 line of credit to buy equipment.
- Interest is 5.75%/yr, compounded daily.
- The chart shows Loretta's transactions for 1 yr.

How much interest did Loretta pay on her line of credit?

Solution

A. Complete the chart for the interest on each transaction.

Transaction amount	Time	Total amount $A = P(1 + i)$	Interest $I = A - P$
$3200	98 d	$A = \$3200\left(1 + \dfrac{\boxed{0.0575}}{365}\right)^{98}$ $\doteq \$3249.78$	$I = \$3249.78 - \$3200$ $= \$\,\underline{49.78}$
$900	173 d	$A = \$\,\underline{900}\left(1 + \dfrac{\boxed{0.0575}}{365}\right)^{\boxed{173}}$ $= \$\,924.86$	$I = \$924.86 - \$\,\underline{900}$ $= \$\,\underline{24.86}$
$1450	67 d	$A = \$\,\underline{1450}\left(\dfrac{1}{} + \dfrac{\boxed{0.0575}}{365}\right)^{\boxed{67}}$ $\doteq \$\,\underline{1465.38}$	$I = \$\underline{1465.38} - \$\,\underline{1450}$ $= \$\,\underline{15.38}$

B. How much interest did Loretta pay on her line of credit?

$\$\,\underline{49.78} + \$\,\underline{24.86} + \$\,\underline{15.38} = \$\,\underline{90.02}$

Loretta paid $\$\,\underline{90.02}$ interest on her line of credit.

Practice

1. Paul is a contractor. He buys supplies on his personal line of credit. The interest rate is 6.25%/yr, compounded daily.
   - Bill paid Paul late for some work. Bill's balance was $3775.00.
   - Paul took 45 d to pay his line of credit.
   - Paul charges his clients for any interest.

   How much interest will Paul charge Bill?

   e.g., $A = \$3775.00\left(1 + \dfrac{0.0625}{365}\right)^{45}$, or $3804.198\ldots$

   $I = \$3804.198\ldots - \$3775.00$, or $29.198\ldots$

   Paul will charge Bill $29.20.

2. a) What are the advantages of a home equity line of credit?

e.g., can borrow a greater amount, and it has a lower interest rate because it is secured

b) What are the disadvantages of a home equity line of credit?

e.g., If it is misused, the bank may own your home.

3. Esmé had three overdraft transactions in May. Each transaction cost $3, plus interest at 19%/yr, compounded daily. Her paycheque was deposited electronically on May 31. It covered all the overdrafts.

a) Complete the chart to determine what Esmé paid.

Date	Transaction amount	Time	Total amount $A = P(1 + i)^n$	Interest $I = A - P$
May 17	$87.50	15 d	$A = \$87.50\left(1 + \frac{0.19}{365}\right)^{15}$ ≐ $88.19	$I = \$\underline{\ 88.19\ } - \$87.50$ $= \$\underline{\ 0.69\ }$
May 21	$184.19	11 d	$A = \$184.19\left(1 + \frac{0.19}{365}\right)^{11}$ ≐ $185.25	$I = \$185.25 - \$184.19$ $= \$1.06$

REFLECTING

What could Esmé have done to avoid this additional cost?

She paid $0.69 + $1.06 = $1.75 in interest.

Total fees: ($3.00 × 2) + $1.75 = $7.75

Esmé paid $7.75 in overdraft fees and interest.

b) Suppose Esmé had a personal line of credit with interest at 9.5%/yr, compounded daily. Complete the chart. How much interest would she have paid?

Date	Transaction amount	Time	Total amount $A = P(1 + i)^n$	Interest $I = A - P$
May 17	$87.50	15 d	$A = \$87.50\left(1 + \frac{0.095}{365}\right)^{15}$ ≐ $87.84	$I = \$\underline{\ 87.84\ } - \$87.50$ $= \$\underline{\ 0.34\ }$
May 21	$184.19	11 d	$A = \$184.19\left(1 + \frac{0.095}{365}\right)^{11}$ ≐ $184.72	$I = \$184.72 - \$184.19$ $= \$0.53$

REFLECTING

Do all financial institutions charge the same interest rates for loans? Explain.

Esmé would have paid $0.34 + $0.53 = $0.87 in interest.

c) Should Esmé get a personal line of credit? Explain.

Yes. e.g., The interest rate is lower and there are no fees. If she had had a line of credit, she would have saved $6.88 in 1 mo.

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NEL

Mid-Chapter Review

1. Match each person with the action you suggest.

    Person   **Action**

    Giselle wants to buy gas for   Get a personal loan.
    her car trip.

    Randall is buying a car.   Get a line of credit.

    Cam is starting a business.   Use a credit card.

2. Georgina has a landscaping business in Red Deer.
    - She plans to buy a ride-on mower for her business.
    - She needs $2500 in credit.

    What are the choices Georgina has for using credit for her business?

    e.g., Georgina could open a line of credit and use this to buy the mower and pay expenses of running the business. She would make a monthly payment against the line of credit. OR Georgina could take a personal loan to buy the mower and use credit cards to pay for the expenses for running the business. She would make a monthly payment to repay the loan and other monthly payments on her credit cards.

3. Harald sells industrial paint.
    - He drives from Calgary to Lethbridge once each week.
    - He needs to borrow money to repair his car's transmission, but does not want to use a credit card.
    - He will be paid at the end of the month.

    Which type of loan should Harald get? Explain.

    e.g., Harald should get a secured personal loan, because he has a job and can pay the loan when he is paid.

4. Cindy has from three to seven overdraft transactions per month. Each transaction costs $3.50, plus interest. She is going to apply for a personal line of credit.

    Do you agree with Cindy's decision? Explain why or why not.

    e.g., I agree. Cindy will likely pay less in overdraft fees. OR I disagree. If the interest rate is really high Cindy might not save much.

Solution

A. How much will Justine pay after the discounts?

Reduce the $2300 price by 10%:

$\$\underline{2300} - (\underline{0.10} \times \$\underline{2300}) = \$\underline{2300} - \$\underline{230}$

$\qquad\qquad\qquad\qquad\qquad\quad = \$\underline{2070}$

Discount the reduced price of $\$\underline{2070}$ by 15%:

$\$\underline{2070} - (\underline{0.15} \times \$\underline{2070}) = \$\underline{2070} - \$\underline{310.50}$

$\qquad\qquad\qquad\qquad\qquad\quad = \$\underline{1759.50}$

Justine will pay $\underline{\$1759.50}$ after the discounts.

B. How much will she pay on the credit card after 6 mo?

$$A = \$\underline{1759.50}\left(1 + \frac{\boxed{0.21}}{\boxed{365}}\right)^{\boxed{5} \times \boxed{30}}$$

$$= \$\underline{1918.044...}$$

C. How much will Justine save?

$\$2300 - \$\underline{1918.044...} = \$\underline{381.955...}$

Justine will save $\$\underline{381.96}$ with the promotion.

Practice

1. Tibor installs floors in Medicine Hat. Underpadding costs $396.42. Tiling costs $1219.23. He saves 5% if he uses his store credit card.

   a) What will Tibor save if he uses the store credit card?
   - Savings on underpadding: $\underline{0.05} \times \underline{\$396.42} = \underline{\$19.821...}$
   - Savings on tiling: $\underline{0.05} \times \underline{\$1219.23} = \underline{\$60.961...}$
   - Total Savings: $\underline{\$19.82} + \underline{\$60.96} = \underline{\$80.78}$

   b) Tibor could pay cash. Should he use his store credit card? Explain.

   e.g., Yes. He will save $80.78, and if he pays the balance on time there will be no interest.

2. Should you use a credit card when you can pay cash? Explain your reasons.

   e.g., Yes. You can earn points or rewards. If you pay the card off on time, there is no interest charge. OR No. You might buy things you cannot afford.

3. Sally always applies for a credit card if the company gives a gift with the card. Do you agree with Sally's decision? Explain.

e.g., Yes. You can get the gift but not use the card. OR No. It is not wise to give away personal information. You may lose track of the cards you have and interest you owe. You may not need the gift.

4. Christine is a fashion designer. She is buying $3000 worth of fabric to make samples for a show. She will pay off her balance 120 d after the grace period. She is comparing two no-fee credit cards.

	Card 1	Card 2
APR	19.99%	15.9%
credit limit	$3000	$5000
cash back	1% on purchases	0.5% on purchases

a) Christine will use the cash back to pay the interest. What interest would she pay on each card?

Card 1

$$A = \$3000\left(1 + \frac{0.1999}{365}\right)^{120}$$

$= \$3203.727...$

$I = \$3203.727... - \$3000$

$= \$203.727...$ Interest: $203.73

Cash back: $3000 × 0.01 = $30.00

Interest − cash back: $203.73 − $30.00

$= \$173.73$

Christine would pay **$173.73** .

Card 2

$$A = \$3000\left(1 + \frac{0.159}{365}\right)^{120}$$

$= \$3160.957...$

$I = \$3160.957... - \$3000$

$= \$160.957...$ Interest: $160.96

Cash back: $3000 × 0.005 = $15.00

Interest − cash back:

$= \$160.96 - \$15.00$

$= \$145.96$

Christine would pay $145.96.

b) Which credit card should Christine choose? Explain how you decided.

Card 2. e.g., Christine would pay less for the fabric. The card has a higher credit limit, so Christine can buy material when needed.

5. James wants to buy a large flat-screen TV. He cannot afford to pay cash and does not have a job. What would you advise James to do?

e.g., James could save the money and buy it when he can afford to pay cash to avoid paying interest. OR James could buy a smaller TV that he can afford.

Chapter Review

1. Anne does not know whether to get a limited-purpose credit card or a charge card. What is your advice?

e.g., Get a charge card if you can always pay your monthly balance and you travel many places. Get a limited-purpose card if you shop at specific stores, and you cannot always pay your monthly balance.

2. Should people have more than one credit card? Explain.

e.g., No. If you have too many credit cards, you could overspend and get into debt. OR Yes. You may be able to save money by using one card instead of another. Also you can have one in case of an emergency.

3. Cynthia is a DJ in Kamloops. She has a MasterCard. The credit limit is $4000. Interest is 19.8%/yr, compounded daily. She used all her credit on the card to buy some new DJ equipment. Cynthia took 49 d after the grace period to pay the balance.

   a) Do you think Cynthia was wise to buy the equipment with her credit card? Explain.

e.g., No. She should have waited until she could pay cash, or at least until she could pay off the card without interest. OR Yes. She is buying something she needs for work.

   b) How much interest did Cynthia pay?

$$\text{e.g., } A = \$4000\left(1 + \frac{0.198}{365}\right)^{49} \qquad I = \$4107.719... - \$4000$$

$$= \$4107.719... \qquad\qquad\qquad = \$107.719...$$

She paid $107.72 in interest.

   c) What other way might Cynthia have paid for her equipment?

e.g., a line of credit or a personal loan

   d) What method of financing would be unwise? Justify your answer.

e.g., a payday loan, because she needed 49 d to pay her balance, and the interest would be very high

4. Mariette works in construction. She often borrows more than $10 000 to buy supplies. She wants to get a line of credit.

a) What type of line of credit should she not get? Justify your answer.

e.g., an overdraft line of credit, because

they usually have a limit of $5000

b) Mariette got a line of credit. Interest is 3.25%/yr, compounded daily. She is going to borrow $12 329 to pay expenses as she renovates a basement. She will pay the balance in 37 d. How much interest will Mariette owe?

e.g., $A = \$12\,329.00\left(1 + \frac{0.0325}{365}\right)^{37}$

$= \$12\,369.683...$

$I = \$12\,369.683... - \$12\,329$

$= \$40.683...$

Mariette will owe $40.68 in interest.
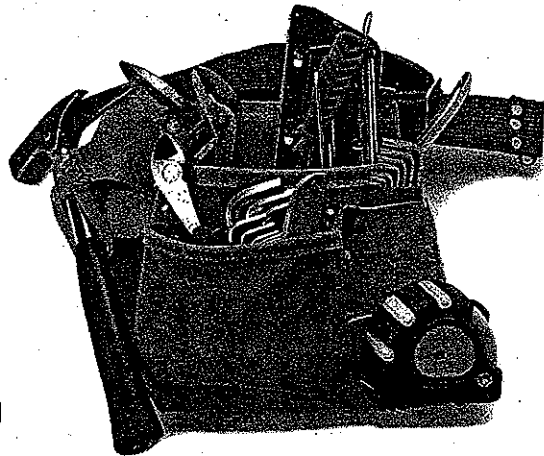
5. Neil is selling his condo in Winnipeg. He is spending $483.98 on window coverings to increase its value. If he uses his credit card, he will save 8% on the purchase and get 2.5% cash back.

a) How much would Neil save with the 8% savings?

e.g., $0.08 \times \$483.98 = \$38.718...$ Neil would save $38.72.

b) How much cash would Neil get back?

e.g., $\$483.98 - \$38.718... = \$445.261...$

Cash back: $\$445.261... \times 0.025 = \$11.131...$ Neil would get $11.13 cash back.

6. Sharon lives in Saskatoon. She wants to go to the West Edmonton Mall for a shopping trip with her friends. She does not have a job or much money. She decides to pay for the trip with her credit card.

Do you think this is wise? Explain.

e.g., No, Sharon should not use her credit card because she may

not be able to pay it off. She should look for a job and not go on the trip.

7. Suppose you are borrowing $500 for 10 d from a financial institution. What would be the least expensive way? Explain.

e.g., Use a line of credit or a personal secured loan. These charge lower interest

rates than other choices. Payday loans or cash advances on credit cards charge

high interest rates.

Chapter Test

1. Tara and her friend Travis each use credit cards.
   - Tara uses her card often. She pays all the balance every month.
   - Travis uses his card just for large purchases. He pays the minimum balance every month.

   Who is using credit more wisely? Why?

   Tara. e.g., Travis carries a balance from one month to the next. So he pays interest. It will take Travis a long time to pay off his debt. It will cost him a lot in the long run.

2. Lina is getting a $28 000 auto loan. The interest rate is 7.5%/yr, compounded daily and paid monthly. What amount will Lina owe at the end of the first month?

   $$A = \$28\,000\left(1 + \frac{0.075}{365}\right)^{30}$$

   $$= \$28\,173.117... \quad \text{Lina will owe } \$28\,173.12.$$

3. What is an overdraft? What is it used for? What fees are charged for it?

   e.g., It is a line of credit. It is used to cover withdrawing money from a bank account when there is not enough money in the account for the withdrawal. A fee and interest are charged on this borrowed money.

4. Barry is a forester in Alberta. He buys about $1450 of gas each year. He is getting a credit card.
   - The card has an annual fee of $50.
   - The card offers a refund of 2% on all gas he buys.

   Should Barry get the card? Explain.

   $0.02 \times \$1450 = \$29$

   e.g., Barry would pay $29 less for gas each year. However, the annual fee is $50. This card will cost him $21 more each year. He should consider a different card.