

## FREQUENTLY ASKED Questions

**Q:** Why can you not assume that the payment method (such as credit card, line of credit, or bank loan) with the lowest interest rate is the best choice for borrowing money?

**A:** Usually the payment method with the lowest interest rate is the best choice, but special promotions, such as rebates, can change this.

For example, Shelby wants to buy furniture, at a cost of \$3800, and needs to use credit. She plans to repay the loan in 9 months. Which payment method below is better?

- The store has financing at 19.95%, compounded monthly, and offers a rebate of \$300.
- Shelby has a line of credit with an interest rate of 3.5%, compounded monthly.

Line of credit:

The number of payments is 9.

The payment frequency is 12 times a year.

The annual interest rate is 3.5%.

The compounding frequency is 12 times a year.

The present value is \$3800.

The payment amount is \$428.40.

The total payment is  $9 \cdot \$428.40$  or \$3855.60.

The total interest is  $\$3855.60 - \$3800$  or \$55.60.

Furniture store financing:

The number of payments is 9.

The payment frequency is 12 times a year.

The annual interest rate is 19.95%.

The compounding frequency is 12 times a year.

The present value is  $\$3800 - \$300$  or \$3500.

The payment amount is \$421.93.

The total payment is  $9 \cdot \$421.93$  or \$3797.37.

Total interest is  $\$3797.37 - \$3500$  or \$297.37.

Even though the line of credit has a much lower interest rate, the store financing is better because it will cost less overall.

**Q:** Why can you not generalize that buying is always better than leasing or renting?

**A:** Generalizing about which option is best is not possible because each situation is different. What is best for a short-term need may not be the same as what is best for a long-term need.

Short-term and long-term costs, depreciation and appreciation, penalties, and equity are examples of cost factors that need to be considered. Benefits such as convenience, flexibility, and personal needs or wants are also factors. An analysis of costs and benefits should take all factors into account.

### Study Aid

- See Lesson 2.3, Examples 1 to 6.
- Try Chapter Review Questions 4 and 5.

### Study Aid

- See Lesson 2.4, Examples 1 to 5.
- Try Chapter Review Questions 6 and 7.

# PRACTISING

## Lesson 2.1

- Aaron paid \$1985 for a backyard gymnasium for his daughter. He used his credit card, which has daily compounding, but plans to pay off the balance in 5 monthly payments of \$403.75.
  - What annual interest rate is being charged?
  - How much interest will Aaron pay?
- Amber paid \$1025 for her prom gown. She used her mother's credit card, which charges 18.9% compounded daily. Amber plans to make \$50 payments each month.
  - When will Amber have paid half the cost of her gown?
  - How long will it take Amber to repay the total amount?
  - How much interest will Amber pay?

## Lesson 2.2

- Greg is planning a week at a fishing lodge on Great Slave Lake. The cost for the week is \$4875. He needs to use one of the following credit cards to pay and can afford monthly payments of \$350:
  - Credit card A, with an interest rate of 9.4%, compounded daily
  - Credit card B, with an interest rate of 14.5%, compounded daily
  - How much will he save if he uses card A instead of card B?
  - Would each incentive below make card B more attractive than card A? Explain.
    - \$100 rebate
    - \$200 rebate

## Lesson 2.3

- Madison wants to visit her parents in Regina at Easter. The return airplane ticket costs \$1736. Madison has two options for payment:
  - A bank loan with an interest rate of 5.6%, compounded monthly
  - A credit card that offers 0% interest for 3 months and then 16.2%, compounded daily
 She plans to make monthly payments of \$250. Which option should she choose? Explain.

- Jordan and Taylor are remodelling their house and have purchased the materials on their three credit cards. They have only managed to make minimum payments until now. They plan to consolidate their debt into a line of credit at 7.3%, compounded monthly, and pay off the full amount in 2 years. Their current credit card balances are shown below. How much will they save by consolidating their debt, assuming that they would have paid off their credit card debt in two years?

Credit Card	Interest Rate, with Daily Compounding	Balance
Card Red	18.9%	\$4196.17
Card Yellow	19.9%	\$2756.46
Card Blue	16.9%	\$6568.74

## Lesson 2.4

- Casey works as a handyman. He shovelled snow on 58 days last winter, so he wants a snowplow this year. He has three options:
  - He could rent a snowplow for \$75 a day.
  - He could buy a used snowplow for \$6400 and pay with his line of credit at 4.9%, compounded monthly, over 2 years. Snowplows depreciate at a rate of 40% per year.
  - He could lease a snowplow for a down payment of \$2500 and monthly payments of \$200 for 2 years.

What would you recommend for Casey? Explain.

- Kayla is entering college in the fall and needs nine textbooks. She has the following options:
  - If she bought new textbooks, at an average cost of \$130 each, she could sell them to a used book dealer for 30% of their original cost after 1 year.
  - She could buy used textbooks at 75% of their cost when new and then resell them for 15% of what she paid, if in good condition, after 1 year.
  - She could rent the textbooks for 40% of their cost when new.

What should Kayla do? Explain.