

Task: Advertising Bank Accounts

Student Text Pages

376–377

Suggested Timing

45–75 min

Materials and Technology

Tools

- graphing calculators with TVM Solver
- grid paper and rulers
- graphing software (optional)

Related Resources

- BLM A–17 Learning Skills Checklist
- BLM 7–14 Chapter 7 Task Rubric

Accommodations

Motor—use technology for graphing; use the TVM Solver for compound interest calculations

Language—have students work in pairs

Memory—use index cards with calculator sequences

Ongoing Assessment

- Use **BLM 7–14 Chapter 7 Task Rubric** to assess student achievement.

Specific Expectations

3.1, 3.2, 3.3, 3.4

Teaching Suggestions

- Encourage students to research at least six different accounts from at least three financial institutions for comparison.
- Ask students to circle on their data sheet the features and benefits of the accounts that attract their attention.
- As students work, you may ask questions such as the following:
 - Why do you choose this method to compile your data?
 - What features of the accounts attract you most? Why?
 - Are there disadvantages of using technology? What are they?
- You may also use **BLM A–17 Learning Skills Checklist** to assist you in assessing the performance of your students.

Hints for Evaluating a Response

Student responses are being assessed for the level of mathematical understanding they represent. As you assess each response, consider the following questions:

- Is there enough data and information to answer the questions?
- Do the explanations make sense?
- Are the calculations correct?
- Do the graphs present the data correctly?
- Are the choices made appropriate and reasonable?
- Do the advertisements show all information? Are they creative?

Level 3 Notes

- Student lists at least five savings accounts from various banks and includes important details such as the annual interest rate and the compounding period.
- Student gives a good explanation of the details of each account and can explain why someone would invest in that savings account.
- Student makes all calculations correctly.
- Graphs present data correctly.
- Student selects at least two different media for advertisements and advertisements present all required information.

Level 3 Sample Response

1.

Financial Institution	Account	Type of Interest	Annual Interest Rate	Minimum Balance	Fees
RBC	High Interest eSavings™	Daily, paid at the end of the month	4%	\$0	Free transfers, fee for other transactions
CIBC	Advantage for Youth	Daily, paid at the end of the month	0.45–1.25% (increases with balance)	\$0	Free transactions
TD Canada Trust	Guaranteed Investment Account	Daily, paid at the end of the month	3.5%	\$5000	One free transaction per month
TD Canada Trust	Premium Savings Account	Monthly, paid semi-annually	0.05%	\$0	10 free transactions
Scotiabank	Money Master for business	Daily, paid at the end of the month	3.5%	\$0	Free transfers, \$5 for other transactions
HSBC	Direct Savings (on-line only)	Daily, paid at the end of the month	4.25% (subject to change)	\$0	No fees
ING Direct	Investment Savings Account	Daily, paid at the end of the month	3.75% (subject to change)	\$0	No fees
Bank of Montreal	Premium Rate Savings Account	Daily, paid at the end of the month	2.6%	\$0	\$0.85 per transaction

2. HSBC's Direct Savings Account

- This account has no minimum balance and transactions are free. The current interest rate of 4.25% per year, calculated daily, is very good. However, this interest rate could change at any time. Also, you must do all your transactions on-line.
- The high interest rate of this account could attract people who want to earn more interest and do not have a problem of accessing their money through ATMs and the Internet.
- For \$1000 invested at 4.25% per year, compounded daily, the amount is:

$$\$1000 \left(1 + \frac{0.0425}{365} \right)^{365} \doteq \$1043.41$$
- It will take just over 16 years for the investment to double.

Bank of Montreal's Premium Rate Savings Account

- This account has no minimum balance and transactions do not cost too much. The interest rate of 2.6% per year, calculated daily, is sort of in the middle of the range. So are the fees for transactions.
- This account could attract people who want to earn a steady interest with the money saved. They may not need transactions at all if the purpose of the account is to save money. People who have no convenient access to ATMs or the Internet could do their banking at a bank branch.
- For \$1000 invested at 2.6% per year, compounded daily, the amount is:

$$\$1000 \left(1 + \frac{0.026}{365} \right)^{365} \doteq \$1026.34$$
- It will take almost 27 years for the investment to double.

CIBC's Advantage for Youth Account

- a) This account has no minimum balance and transactions are free. The interest rate of 0.45–1.25% per year, calculated daily, is low, but you do not have to pay for transactions. You might take advantage of this if you need to do a lot of transactions each month.
- b) This account could attract youths under the age of 18 as there is no minimum balance. They could get interest back on their savings while they have frequent access to their money. As the interest rate increases with the balance, this would encourage youths to save more money.
- c) For \$1000 invested at 0.45% per year, compounded daily, the amount is:

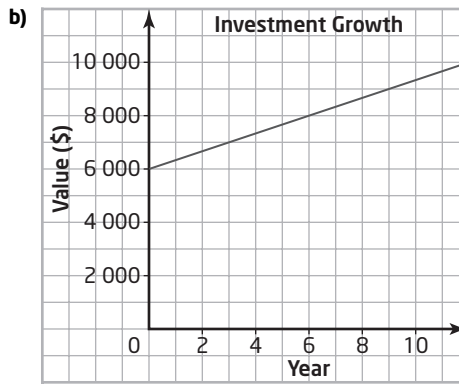
$$\$1000\left(1 + \frac{0.0045}{365}\right)^{365} \doteq \$1004.51$$
- d) It will take about 154 years for the investment to double.

3. HSBC's Direct Savings Account:

- a) To receive a final amount of \$10 000 at the interest rate of 4.25% per year, compounded daily, for 8 years, use the present value formula:

$$\begin{aligned} PV &= FV(1 + i)^{-n} \\ &= 10\,000\left(1 + \frac{0.0425}{365}\right)^{-2920} \\ &\doteq 7117.84 \end{aligned}$$

The present value is about \$7117.84.



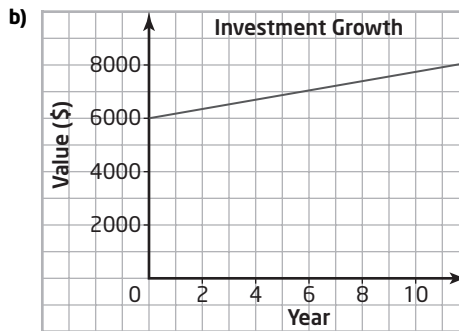
- c) According to the graph, the amount would be about \$7900 after 6 years. According to the TVM Solver, the amount would be \$7742.65.

Bank of Montreal's Premium Rate Savings Account:

- a) To receive a final amount of \$10 000 at the interest rate of 2.6% per year, compounded daily, for 8 years, use the present value formula:

$$\begin{aligned} PV &= FV(1 + i)^{-n} \\ &= 10\,000\left(1 + \frac{0.026}{365}\right)^{-2920} \\ &\doteq 8122.13 \end{aligned}$$

The present value is about \$8122.13.



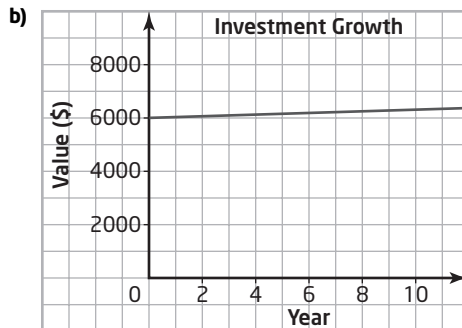
- c) According to the graph, the account would be about \$7100 after 6 years. According to the TVM Solver, the amount would be \$7012.92.

CIBC's Advantage for Youth Account

- a) To receive a final amount of \$10 000 at the interest rate of 0.045% per year, compounded daily, for 8 years, use the present value formula:

$$\begin{aligned}PV &= FV(1 + i)^{-n} \\ &= 10\,000 \left(1 + \frac{0.0045}{365}\right)^{-2920} \\ &\doteq 9646.41\end{aligned}$$

The present value is about \$9646.41.



- c) According to the graph, the account would be about \$6200 after 6 years. According to the TVM Solver, the amount would be \$6164.21.

4. HSBC's Direct Savings Account

I chose to make a page for the bank's Web site to advertise this account because it is supposed to attract people who would do their banking on-line.

Earn more money now!

Get the best interest rate on your savings account by banking on-line.

- free transactions
- daily interest
- access from anywhere
- available 24/7

4.25%

Click to compare details with a 3.25% interest account

Our Account	Their Account
Double your money 3.5 years earlier	Double your money in 19.8 years
Get \$10 000 in 8 years, invest in \$400 less	Get \$10 000 in 8 years, invest: \$7557.94

Bank of Montreal's Premium Rate Savings Account

I chose to make a poster to hang in the bank to advertise this account because it is aimed at people who prefer not to bank on-line.

Premium Rate Savings Account

Guaranteed 2.6% Interest Rate
Low Transactions Fees

Get Your Money
Earning **More Money!**

Compare:
A standard account earning 0.05% – in 6 years, \$6000 will give \$6024.05.
Our account will give **\$8122.13!**

CIBC's Advantage for Youth Account

I chose to make a pamphlet for this account so that people could pick it up when they visit the bank for account information, and parents could take it home to show their kids. If I were the bank, I would also add some photographs to the pamphlet.

Under 18?
Got some money saved?
Want to make it grow?

Check out our
Advantage for Youth
savings account!

Even with just \$1 in your account, you'll be earning interest on your savings.

Interest starts at 0.45% and can get as high as 1.25%. Compare this to keeping money in your sock drawer!

Get an extra dollar for keeping \$200 in your account for a year.

And did we mention, there are no transaction fees?

Talk to a teller today!

What Distinguishes Level 2

- Student lists fewer than five bank accounts and omits useful information such as interest rate and compounding period.
- Student leaves valuable information out of descriptions of accounts or has difficulty explaining why someone would choose that savings account.
- Student makes errors in calculations.
- Graphs contain errors or are poorly drawn.
- Advertisements are incomplete or unattractive.

What Distinguishes Level 4

- Student compares more than six savings accounts using at least five different criteria.
- All calculations are correct and well explained.
- Graphs neatly present information about future values.
- Student justifies choice of media for the advertisements.
- Advertisements demonstrate creativity and neatly includes more information than required.

