

Strand
Personal Finance

Student Text Pages
502–503

Suggested Timing
80–160 min

Tools

- computers with Internet access
- TVM Solver

Related Resources
BLM 9-16 Task: Organise Your
Personal Finances Rubric

Specific Expectations

Solving Problems Involving Compound Interest

PF1.01 determine, through investigation using technology, the compound interest for a given investment, using repeated calculations of simple interest, and compare, using a table of values and graphs, the simple and compound interest earned for a given principal (i.e., investment) and a fixed interest rate over time

PF1.02 determine, through investigation, and describe the relationship between compound interest and exponential growth

PF1.03 solve problems, using a scientific calculator, that involve the calculation of the amount, A (also referred to as future value, FV), and the principal, P (also referred to as present value, PV), using the compound interest formula in the form $A = P(1 + i)^n$ [or $FV = PV(1 + i)^n$]

PF1.04 calculate the total interest earned on an investment or paid on a loan by determining the difference between the amount and the principal [e.g., using $I = A - P$ (or $I = FV - PV$)];

PF1.05 solve problems, using a TVM Solver in a graphing calculator or on a website, that involve the calculation of the interest rate per compounding period, i , or the number of compounding periods, n , in the compound interest formula $A = P(1 + i)^n$ [or $FV = PV(1 + i)^n$]

PF1.06 determine, through investigation using technology, the effect on the future value of a compound interest investment or loan of changing the total length of time, the interest rate, or the compounding period

Comparing Financial Services

PF2.02 gather and interpret information about investment alternatives, and compare the alternatives by considering the risk and the rate of return

PF2.03 gather, interpret, and compare information about the costs and incentives associated with various credit cards and debit cards

PF2.04 gather, interpret, and compare information about current credit card interest rates and regulations, and determine, through investigation using technology, the effects of delayed payments on a credit card balance

Owning and Operating a Vehicle

PF3.01 gather and interpret information about the procedures and costs involved in insuring a vehicle and the factors affecting insurance rates, and compare the insurance costs for different categories of drivers and for different vehicles

PF3.02 gather, interpret, and compare information about the procedures and costs involved in buying or leasing a new vehicle or buying a used vehicle

PF3.03 solve problems, using technology that involve the fixed costs and variable costs of owning and operating a vehicle

Accommodations

Motor—allow extra time and assist with recording of calculations

Language—allow students to work with a partner to ensure students understand what they are being asked to do. Have them provide some responses orally to check for comprehension.

Teaching Suggestions

- Have students read the entire Task. Discuss the Task and ensure students understand what they are being asked to do.
- Discuss strategies and review necessary skills and concepts for solving financial problems.
- Circulate as students complete the task and assist them as necessary.

Prompts for Getting Started

- You may wish to have copies of personal finance self-help books available for student reference.
- Have students refer to their responses to the Investigates throughout Chapter 9. They have already collected some information related to credit cards, obtaining and operating a vehicle, and investing.

Hints for Evaluating a Response

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

- How much assistance did the student need to understand what information was required?
- How much assistance did the student need to create a monthly budget for obtaining and operating a vehicle?
- How much assistance did the student need to complete the Task?
- What parts of the Task did the student complete/not complete?
- Did the student present work that is clear and easy to follow and understand?
- Did the student demonstrate an understanding of the costs and benefits of obtaining and using credit cards?
- Did the student demonstrate an understanding of the costs involved with obtaining and operating a vehicle?
- Did the student demonstrate an understanding of investment alternatives?

Level 3 Sample Response

Answers may vary. Refer to answers to the Investigates throughout this chapter for a sample response.

Level 3 Notes

Look for the following:

- appropriate information provided relating to the costs, advantages, and disadvantages of obtaining and using credit cards, obtaining and operating a vehicle, and investing with few minor errors
- understanding of compound interest and regular payments into an investment or onto a loan
- understanding of problem solving techniques
- organised presentation of information with clear justification provided for choices
- effective use of financial terms

What Distinguishes Level 2

Look for the following:

- some appropriate information provided relating to the costs, advantages, and disadvantages of obtaining and using credit cards, obtaining and operating a vehicle, and investing with some significant errors
- some understanding of compound interest and regular payments into an investment or onto a loan
- some understanding of problem solving techniques, but difficulty in applying the techniques
- somewhat organised presentation of information and some justification for choices
- somewhat effective use of financial terms

What Distinguishes Level 4

Look for the following:

- appropriate and detailed information provided relating to the costs, advantages, and disadvantages of obtaining and using credit cards, obtaining and operating a vehicle, and investing with very few or no errors
- thorough understanding of compound interest and regular payments into an investment or onto a loan
- highly effective use of problem solving techniques
- highly organised presentation of information and clear, accurate, and detailed justification for choices
- highly effective use of financial terms

Ongoing Assessment

- Use **BLM 9-16 Task: Organise Your Personal Finances Rubric** to assess student achievement.