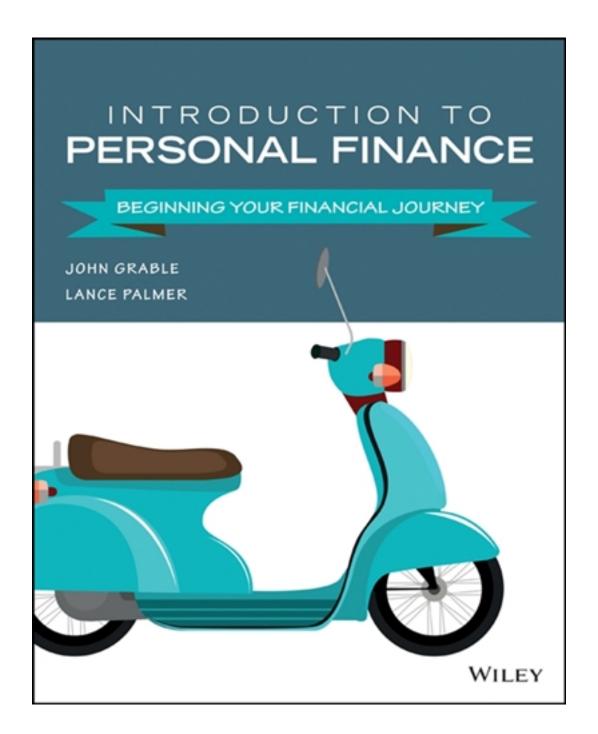
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Test Bank

Test Bank: Chapter 2

Introduction to Personal Finance: Beginning Your Financial Journey By John Grable and Lance Palmer

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Bloom's Taxonomy Key:

- K Knowledge
- C Comprehension
- Ap Application
- A Analysis
- S Synthesis
- E Evaluation
 - 1. Which of the following refers to the price paid for using money?
 - a. Interest.
 - b. Debt.
 - c. Principal.
 - d. Compound growth.

Ans: a, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 2. Which of the following refers to the amount of money borrowed?
 - a. Interest.
 - b. Debt.
 - c. Principal.
 - d. Compound growth.

Ans: c, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 3. Which of the following can affect the loan interest rate?
 - a. Your salary.
 - b. Purpose of the loan.
 - c. Your prior financial behaviors.
 - d. All of these answer choices are correct.

Ans: d, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 4. Which of the following refers to investment gains earned in the first time period that are put to work in the second time period to earn additional investment returns?
 - a. Interest.
 - b. Debt.
 - c. Principal.
 - d. Compound growth.

Ans: d, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 5. Which of the following is a rule that can help you grow your money?
 - a. The longer you let your money grow, the more you will have in the future (assuming the same interest rate).
 - b. The more interest you earn, the more you will accumulate over time.
 - c. The higher the interest rate you want, the more risk you must take.
 - d. All of these answer choices are correct.

Ans: d, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 6. The Federal Deposit Insurance Corporation and the National Credit Union Administration protect savings deposits up to what amount?
 - a. \$250,000.
 - b. \$350,000.
 - c. \$450,000.
 - d. \$500,000.

Ans: a, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 7. If risk is low, then the interest rate that your money earns is generally
 - a. high.
 - b. low.
 - c. doubled.
 - d. not affected.

Ans: b, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 8. What is the annual percentage rate (APR) if a bank pays 0.3% interest monthly on savings?
 - a. 1.8%.
 - b. 2.4%.
 - c. 3.6%.
 - d. 4.8%.

Ans: c, LO: 2.1, Section 2.1, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: APR = Periodic linterest Rrate xx Number of Pperiods in the Yyear

Solution: 0.3% periodic interest rate ×x 12 periods in the year = 3.6% APR

- 9. What is the APR if a bank pays 0.25% interest monthly on savings?
 - a. 2.4%.
 - b. 3.0%
 - c. 3.6%.
 - d. 4.8%.

Ans: b, LO: 2.1, Section 2.1, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: APR = Periodic Linterest Rrate xx Number of Pperiods in the Yyear

Solution: 25% periodic interest rate × 12 periods in the year -= 3% APR

- 10. What is the APR if a bank pays 0.4% interest monthly on savings?
 - a. 1.8%.
 - b. 2.4%.
 - c. 3.6%.
 - d. 4.8%.

Ans: d, LO: 2.1, Section 2.1, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: APR = Periodic linterest Rrate *x Number of Pperiods in the Yyear

Solution: 0.4% periodic interest rate × 12 periods in the year = 4.8% APR

- 11. Which of the following provides an estimate of how long it will take you to double your money?
 - a. Rule of 72.
 - b. Compounding interest.
 - c. APR.
 - d. APY.

Ans: a, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 12. How long will it take for your money to double if the annual percentage yield (APY) is 6%?
 - a. 12 years.
 - b. 12 months.
 - c. 10 years.
 - d. 10 months.

Ans: a, LO: 2.1, Section 2.1, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72. $\frac{72}{\text{Interest rate}} = \text{Number of years}$

Solution: $\frac{72}{6} = 12$ years

Field Code Changed

Field Code Changed

- 13. What should you compare when comparing loans?
 - a. Principal.
 - b. Interest rate.
 - c. APR.
 - d. APY.

Ans: c, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 14. What should you compare when comparing savings options?
 - a. Principal.
 - b. Interest rate.
 - c. APR.
 - d. APY.

Ans: d, LO: 2.1, Section 2.1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 15. How long will it take for your money to double if the APY is 8%?
 - a. 9 years.
 - b. 9 months.
 - c. 12 years.
 - d. 12 months.

Ans: a, LO: 2.1, Section 2.1, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72. $\frac{72}{\text{Interest rate}}$ = Number of years

Solution: $\frac{72}{8} = 9$ years

Field Code Changed

Field Code Changed

- 16. What formulas and calculations are some of the most valuable external finance tools that allow you to consider financial goals in terms of money, time, and interest?
 - a. APR.
 - b. APY.

- c. Rule of 72.
- d. Time value of money (TVM).

Ans: d, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 17. Which of the following refers to a series of equal payments or deposits?
 - a. Annuity.
 - b. Future value.
 - c. Number of periods.
 - d. TVM.

Ans: a, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 18. Which of the following refers to the rate of return or discount rate used to determine future value (FV) or present value (PV)?
 - a. Principal.
 - b. Interest.
 - c. Rule of 72.
 - d. TVM.

Ans: b, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 19. Which of the following estimates how much current savings and investments will be worth at a certain date in the future?
 - a. FV of a lump sum.
 - b. PV of a lump sum.
 - c. FV of an annuity.
 - d. PV of an annuity.

Ans: a, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 20. Which of the following determines the current value of a future amount?
 - a. FV of a lump sum.
 - b. PV of a lump sum.
 - c. FV of an annuity.
 - d. PV of an annuity.

Ans: b, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 21. Which of the following determines the current value of a regular series of equal payments occurring in the future?
 - a. FV of a lump sum.
 - b. PV of a lump sum.
 - c. FV of an annuity.

d. PV of an annuity.

Ans: d, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 22. Which of the following estimates how much you will have in the future if you save or invest a set dollar amount on a regular basis?
 - a. FV of a lump sum.
 - b. PV of a lump sum.
 - c. FV of an annuity.
 - d. PV of an annuity.

Ans: c, LO: 2.2, Section 2.2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 23. If you start with \$2,000 today, approximately how much will you have in 2 years if you can earn 6% each year?
 - a. \$2,247.
 - b. \$2,547.
 - c. \$3,047.
 - d. \$3,247.

Ans: a, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the future value of a lump sum.

Solution Range: \$2,247-\$2,247.20

Financial Calculator Inputs (TI BAII Plus)

PV = -2,000 (negative because cash-flow out)

N = 2

I = 6

CPT FV = \$2,247.20

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

 $FV_n = PV(1+i)^n$

 $FV_n = $2,000 (1+0.06)^2$

 $FV_n = $2,000 \times 1.1236$

 $FV_n = $2,247.20$

Excel Spreadsheet

Field Code Changed

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- = FV(rate, nper, pmt, pv)
- = FV(0.06, 2, 0, -2,000)

FV = \$2,247.20

- 24. If you start with \$2,500 today, approximately how much will you have in 5 years if you can earn 4% each year?
 - a. \$2,241.
 - b. \$2,541.
 - c. \$3,041.
 - d. \$3,241.

Ans: c, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the future value of a lump sum.

Solution Range: \$3,041.62-\$3,042

Financial Calculator Inputs (TI BAII Plus)

PV = -2,500 (negative because cash-flow out)

N = 5

I = 4

CPT FV = \$3,041.63

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

 $FV_n = PV(1+i)^n$

 $FV_n = \$2,500 (1+0.04)^5$

 $FV_n = $2,500 \times 1.21665$

 $FV_n = $3,041.62$

Excel Spreadsheet

- = FV(rate, nper, pmt, pv)
- = FV(0.04, 5, 0, -2, 500)

FV = \$3,041.63

- 25. If you start with \$4,000 today, approximately how much will you have in 8 years if you can earn 8% each year?
 - a. \$6,454.
 - b. \$7,404.
 - c. \$8,444.
 - d. \$9,244.

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Field Code Changed

Field Code Changed

Field Code Changed

Ans: b, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the future value of a lump sum.

Solution Range: \$7,403.72-\$7,404

Financial Calculator Inputs (TI BAII Plus)

PV = -4,000 (negative because cash-flow out)

N = 8

I = 8

CPT FV = \$7,403.72

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

 $FV_n = PV(1+i)^n$

 $FV_n = $4,000 (1+0.08)^8$

 $FV_n = \$4,000 \times 1.85093$

 $FV_n = \$7,403.72$

Excel Spreadsheet

= FV(rate, nper, pmt, pv)

= FV(0.08, 8, 0, -4,000)

FV = \$7,403.72

- 26. Approximately, how many years would it take your money to grow from \$4,000 to \$8,000 if you could earn 4% interest?
 - a. 12.
 - b. 14.
 - c. 16.
 - d. 18.

Ans: d, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72: How long it will take for the money to double: $\frac{72}{\text{Interest rate}} = \text{Years}$

Solution:
$$\frac{72}{4} = 18$$
 years

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

- 27. Approximately, how many years would it take your money to grow from \$5,000 to \$10,000 if you could earn 6% interest?
 - a. 12.
 - b. 14.
 - c. 16.
 - d. 18.

Ans: a, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72: How long it will take for the money to double: $\frac{72}{Interest\ rate} = Years$

Solution: $\frac{72}{6} = 12$ years

- 28. Approximately what interest rate would you need to earn in order to turn \$3,500 into \$7,000 over 5 years?
 - a. 12%.
 - b. 15%.
 - c. 16%.
 - d. 18%.

Ans: b, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72: $\frac{72}{\text{Years}}$ = Interest rate

Solution: $\frac{72}{5} = 14.4\%$

- 29. Approximately, what interest rate would you need to earn in order to turn \$2,500 into \$5,000 over 6 years?
 - a. 12%.
 - b. 14%.
 - c. 16%.
 - d. 18%.

Ans: a, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

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Field Code Changed

Field Code Changed

Field Code Changed

Formula: Rule of 72: $\frac{72}{Years}$ = Interest rate

Solution: $\frac{72}{6} = 12\%$

Field Code Changed

Field Code Changed

- 30. Approximately, what interest rate would you need to earn in order to turn \$6,500 into \$13,000 over 8 years?
 - a. 9%.
 - b. 10%.
 - c. 11%.
 - d. 12%.

Ans: a, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72: $\frac{72}{\text{Years}} = \text{Interest rate}$

Solution: $\frac{72}{8} = 9\%$

Field Code Changed

Field Code Changed

- 31. A grandmother just put \$12,000 into an investment earning 6% a year for her granddaughter's college education. Approximately, how much will be in the account in 10 years assuming that all the interest is left in the account?
 - a. \$19,200.
 - b. \$21,490.
 - c. \$16,250.
 - d. \$21,339.

Ans: b, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 1, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the future value of a lump sum.

Solution Range: \$21,490-\$21,490.20

Financial Calculator Inputs (TI BAII Plus)

PV = -12,000 (negative because cash-flow out)

N = 10

I = 6

CPT FV = \$21,490.17

Field Code Changed

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

 $FV_n = PV(1+i)^n$

 $FV_n = $12,000 (1+0.06)^{10}$

 $FV_n = $12,000 \times 1.79085$

 $FV_n = $21,490.20$

Excel Spreadsheet

= FV(rate, nper, pmt, pv)

= FV(0.06, 10, 0, -12, 000)

FV = \$21,490.17

32. Emanuel invested \$10,000 in a security that will double in value in 10 years. Approximately, what annual rate of return is this investment making?

- a. 10%.
- b. 7.2%.
- c. 6.3%.
- d. 6%.

Ans: b, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Formula: Rule of 72: $\frac{72}{Years}$ = Interest rate

Solution: $\frac{72}{10} = 7.2\%$

33. Jorge has the opportunity to receive \$12,000 now or \$15,000 in 4 years. If Jorge can earn 6% on his investment, what is the approximate present value of the \$15,000?

- a. \$15,000.
- b. \$13,785.
- c. \$11,881.
- d. \$12,000.

Ans: c, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the present value of a lump sum.

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Field Code Changed

Field Code Changed

Field Code Changed

Solution Range: \$11,881-\$11,881.40

Financial Calculator Inputs (TI BAII Plus)

FV = -15,000 (negative because cash-flow out)

N = 4

I = 6

CPT PV = \$11,881.40

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

$$PV_n = \frac{FV}{(1+i)'}$$

$$PV_n = \frac{\$15,000}{\left(1 + 0.06\right)^4}$$

$$PV_{n} = \frac{\$15,000}{1.26248}$$

$$PV_n = $11,881.38$$

Excel Spreadsheet

= PV(rate, nper, pmt, fv)

= PV(0.06, 4, 0, -15000)

PV = \$11,881.40

- 34. Jorge has the opportunity to receive \$10,000 now or \$12,000 in 4 years. If Jorge can earn 6% on his investment, what is the approximate present value of the \$12,000?
 - a. \$10,000.
 - b. \$9,505.
 - c. \$11,881.
 - d. \$12,000.

Ans: b, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the present value of a lump sum.

Solution Range: \$9,505-\$9,505.12

Financial Calculator Inputs (TI BAII Plus)

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Field Code Changed

Field Code Changed

FV = -12,000 (negative because cash-flow out)

N = 4

I = 6

CPT PV = \$9,505.12

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

$$PV_n = \frac{FV}{(1+i)^n}$$

$$PV_n = \frac{\$12,000}{\left(1 + 0.06\right)^4}$$

$$PV_n = \frac{$12,000}{1,26248}$$

 $PV_n = $9,505.10$

Excel Spreadsheet

= PV(rate, nper, pmt, fv)

= PV(0.06, 4, 0, -12,000)

PV = \$9,505.12

35. If Sean can earn 4%, approximately what will his \$3,000 in savings be worth in 10 years?

- a. \$3,600.
- b. \$4,441.
- c. \$5,640.
- d. \$6,240.

Ans: b, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the future value of a lump sum.

Solution Range: \$4,440.72-\$4,441

Financial Calculator Inputs (TI BAII Plus)

PV = -3,000 (negative because cash-flow out)

N = 10

I = 4

CPT FV = \$4,440.73

Note: Entry requirements may vary slightly for other financial calculators.

FOR INSTRUCTOR USE ONLY

Field Code Changed

Field Code Changed

Field Code Changed

Test Bank for Introduction to Personal Finance: Beginning Your Financial Journey, 1st Edition **Future Value of a Lump Sum Formula** Field Code Changed $FV_n = PV(1+i)^n$ $FV_n = \$3,000 (1+0.04)^{10}$ $FV_n = $3,000 \times 1.48024$ $FV_n = \$4,440.72$ **Excel Spreadsheet** = FV(rate, nper, pmt, pv) Field Code Changed = FV(0.04, 10, 0, -3,000)FV = \$4,440.7336. If Mia can earn 6%, approximately what will her \$5,000 in savings be worth in 15 years? a. \$8,983. b. \$9,983. c. \$10,983. d. \$11,983. Ans: d, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none Solution: Calculate the future value of a lump sum. Solution Range: \$11,982.79-\$11,983 Financial Calculator Inputs (TI BAII Plus) PV = -5,000 (negative because cash-flow out) Field Code Changed N = 15I = 6CPT FV = \$11,982.79Note: Entry requirements may vary slightly for other financial calculators. **Future Value of a Lump Sum Formula** $FV_n = PV(1+i)^n$ **Field Code Changed** $FV_n = \$5,000 (1+0.06)^{15}$ $FV_n = $5,000 \times 2.39658$ $FV_n = $11,982.90$ **Excel Spreadsheet**

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= FV(rate, nper, pmt, pv)

= FV(0.06, 15, 0, -5,000)

FV = \$11,982.79

- 37. Approximately how much money do you need today to ensure that you will have \$12,000 in 3 years, assuming you can earn 4% on your savings?
 - a. \$10,668.
 - b. \$11,224.
 - c. \$11,668.
 - d. \$12,668.

Ans: a, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the present value of a lump sum.

Solution Range: \$10,667.96-\$10,668

Financial Calculator Inputs (TI BAII Plus)

FV = -12,000 (negative because cash-flow out)

N = 3

I = 4

CPT PV = \$10,667.96

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

$$PV_n = \frac{FV}{(1+i)^n}$$

$$PV_n = \frac{\$12,000}{(1+0.04)^3}$$

$$PV_{n} = \frac{\$12,000}{1.12486}$$

 $PV_n = $10,667.99$

Excel Spreadsheet

= PV(rate, nper, pmt, fv)

= PV(0.04, 3, 0, -12, 000)

PV = \$10,667.96

Field Code Changed

Field Code Changed

Field Code Changed

Field Code Changed

- 38. How much money do you need today to ensure that you will have \$16,000 in 4 years, assuming you can earn 6% on your savings?
 - a. \$10,674.
 - b. \$11,274.
 - c. \$11,674.
 - d. \$12,674.

Ans: d, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the present value of a lump sum.

Solution Range: \$12,673-\$12,673.47

Financial Calculator Inputs (TI BAII Plus)

FV = -16,000 (negative because cash-flow out)

N = 4

I = 6

CPT PV = \$12,673.50

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

$$PV_n = \frac{FV}{(1+i)^n}$$

$$PV_n = \frac{\$16,000}{(1+0.06)^4}$$

$$PV_n = \frac{\$16,000}{1.26248}$$

$$PV_n = $12,673.47$$

Excel Spreadsheet

= PV(rate, nper, pmt, fv)

= PV(0.06, 4, 0, -16,000)

PV = \$12,673.50

- 39. Approximately how much money will you accumulate in your retirement account if you save \$5,000 per year for 15 years and earn 6% on your investments?
 - a. \$101,668.
 - b. \$111,224.
 - c. \$116,380.

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d. \$121,668.

Ans: c, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the future value of an annuity.

Solution Range: \$116,379.85-\$116,380

Financial Calculator Inputs (TI BAII Plus)

PV = 0

N = 15

I = 6

PMT = -5,000 (negative because cash-flow out)

CPT FV = \$116,379.85

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of Annuity Factor Table (Ordinary Annuity)

Future value of a \$1 annuity (period = 15 @ 6%) = 23.27597

 $FVA = Payment \times FVA$ factor of \$1

 $FVA = \$5,000 \times 23.27597 = \$116,379.85$

Future Value of a Lump Sum Formula

$$FVA_{n} = \frac{PMT}{i} \left[(1+i)^{n} - 1 \right]$$

$$FVA_n = \frac{\$5,000}{0.06} [(1+0.06)^{15} - 1]$$

$$FVA_n = \$83,333.33333(2.39656-1)$$

 $FVA_n = \$83,333.33333 \times 1.39656$

 $FVA_n = $116,380$

Excel Spreadsheet

= FV(rate, nper, pmt, pv)

= FV(0.06, 15, -5000, 0)

FV = \$116,379.85

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- 40. Approximately how much money will you accumulate in your retirement account if you save \$2,500 per year for 40 years and earn 5% on your investments?
 - a. \$201,668.
 - b. \$254.889.
 - c. \$289,464.

d. \$301,999.

Ans: d, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

 $\label{eq:Solution:Calculate} Solution: Calculate the future value of an annuity.$

Solution Range: \$301,999-\$301,999.44

Financial Calculator Inputs (TI BAII Plus)

PV = 0

N = 40

I = 5

PMT = -2,500 (negative because cash-flow out)

CPT FV = \$301,999.44

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of Annuity Factor Table (Ordinary Annuity)

Future value of a \$1 annuity (period = 40 @ 5%) = 120.7998

 $FVA = Payment \times FVA$ factor of \$1

 $FVA = $2,500 \times 120.7998 = $301,999.50$

Future Value of a Lump Sum Formula

$$FVA_n = \frac{PMT}{i} \left[(1+i)^n - 1 \right]$$

$$FVA_n = \frac{2,500}{0.05} \left[(1 + 0.05)^{40} - 1 \right]$$

 $FVA_n = $50,000(7.03999-1)$

 $FVA_n = $50,000 \times 6.03999$

 $FVA_n = $301,999.50$

Excel Spreadsheet

= FV(rate, nper, pmt, pv)

= FV(0.05, 40, -2,500, 0)

FV = \$301,999.44

- 41. Approximately how much money will you accumulate in your retirement account if you save \$1,000 per year for 30 years and earn 6% on your investments?
 - a. \$72,468.
 - b. \$79,058.

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c. \$86,380.

d. \$91,668.

Ans: b, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA:

Solution: Calculate the future value of an annuity.

Solution Range: \$79,058-\$79,058.19

Financial Calculator Inputs (TI BAII Plus)

PV = 0

N = 30

I = 6

PMT = -1,000(negative because cash-flow out)

CPT FV = \$79,058.19

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of Annuity Factor Table (Ordinary Annuity)

Future value of a \$1 annuity (period = 30 @ 6%) = 79.05819

 $FVA = Payment \times FVA$ factor of \$1

 $FVA = \$1,000 \times 79.05819 = \$79,058.19$

Future Value of a Lump Sum Formula

$$FVA_n = \frac{PMT}{i} \left[(1+i)^n - 1 \right]$$

$$FVA_n = \frac{\$1,000}{0.06} \left[(1+0.06)^{30} - 1 \right]$$

 $FVA_n = $16,666.6667(5.74349-1)$

 $FVA_n = $16,666.667 \times 4.74349$

 $FVA_n = $79,058.17$

Excel Spreadsheet

= FV(rate, nper, pmt, pv)

= FV(0.06, 30, -1, 000, 0)

FV = \$79,058.19

- 42. Which of the following can you use to solve TVM problems?
 - a. Microsoft Excel.
 - b. A financial calculator.
 - c. An app designed to solve these types of problems.

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d. All of these answer choices are correct.

Ans: d, LO: 2.3, Section 2.3, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 43. Max has the opportunity to receive \$15,000 now or \$20,000 in 5 years. If Max can earn 6% on his investment, what is the approximate present value of the \$20,000?
 - a. \$15,000.
 - b. \$20,000.
 - c. \$11,881.
 - d. \$14,945.

Ans: d, LO: 2.3, Section 2.3, Bloom: A, Difficulty: Medium, Min: 2, AACSB: none, AICPA FC: none, IMA: none

Solution: Calculate the present value of a lump sum.

Solution Range: \$14,945-\$14,945.23

Financial Calculator Inputs (TI BAII Plus)

FV = -20,000 (negative because cash-flow out)

N = 5

I = 6

PMT = 0

CPT PV = \$14,945.16

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

$$PV_n = \frac{FV}{(1+i)^n}$$

$$PV_n = \frac{\$20,000}{(1+0.06)^5}$$

$$PV_n = \frac{\$20,000}{1.33822}$$

 $PV_n = $14,945.23$

Excel Spreadsheet

= PV(rate, nper, pmt, fv)

= PV(0.06, 5, 0, -20,000)

PV = \$14,945.16

44. Which of the following refers to a payment of the same amount for a set number of months or years, such as in a car loan or mortgage?

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- a. Amortized payment.
- b. Compound interest.
- c. Annuity.
- d. Interest.

Ans: a, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 45. Which of the following refers to saving money on a regular basis?
 - a. Amortized payment.
 - b. Compound interest.
 - c. Annuity.
 - d. Interest.

Ans: c, LO: 2.2, Section 2.2, Bloom: A, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 46. Which of the following refers to what you own?
 - a. Assets.
 - b. Liabilities.
 - c. Net worth.
 - d. Principal.

Ans: a, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 47. Which of the following refers to what you owe?
 - a. Assets.
 - b. Liabilities.
 - c. Net worth.
 - d. Principal.

Ans: b, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 48. Which of the following refers to your assets minus your liabilities?
 - a. Assets.
 - b. Liabilities.
 - c. Net worth.
 - d. Principal.

Ans: c, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 49. Which of the following is on the left side of the balance sheet?
 - a. Assets.
 - b. Liabilities.
 - c. Net worth.
 - d. Principal.

Ans: a, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 50. Which of the following is on the right side of the balance sheet?
 - a. Assets.
 - b. Liabilities only.
 - c. Net worth only.
 - d. Liabilities and net worth.

Ans: d, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 51. What happens to your net worth if you sell your car for more than you owe?
 - a. Increase.
 - b. Decrease.
 - c. No change.
 - d. Cannot determine with the given information.

Ans: d, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Medium, Min: 1, AACSB: none, AICPA FC: none, IMA: none

Solution: Net worth is assets minus liabilities. We do not know how much the car is worth, so we cannot determine the effect on net worth.

- 52. Which of the following refers to how quickly an asset can be converted to cash?
 - a. Liability.
 - b. Liquidity.
 - c. Fair market value.
 - d. Monetary asset.

Ans: b, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 53. Which of the following is an asset that would appreciate in value over time?
 - a. Car.
 - b. Computer.
 - c. House.
 - d. Bicycle.

Ans: c, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 54. Which of the following refers to an asset that increases in fair market value over time?
 - a. Depreciating asset.
 - b. Liquidity.
 - c. Liability.
 - d. Appreciating asset.

Ans: d, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 55. Which of the following refers to an asset that decreases in value over time?
 - a. Depreciating asset.
 - b. Liquidity.
 - c. Liability.
 - d. Appreciating asset.

Ans: a, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 56. Which of the following is an asset that would depreciate in value over time?
 - a. Car.
 - b. Computer.
 - c. Bicycle.
 - d. All of these answer choices are correct.

Ans: d, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 57. Which of the following is an example of a short-term debt?
 - a. Utility bill.
 - b. Car loan.
 - c. Student loan.
 - d. Mortgage.

Ans: a, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 58. Which of the following refers to a debt that is paid off within a year?
 - a. Short-term debt.
 - b. Long-term debt.
 - c. Liabilities.
 - d. Assets.

Ans: a, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 59. Which of the following refers to the difference between the value of an asset and any liability (debt) associated with that asset?
 - a. Equity.
 - b. Liquidity.
 - c. Appreciating asset.
 - d. Depreciating asset.

Ans: a, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 60. Which of the following refers to borrowing money to buy something that either depreciates quickly in value or is consumed immediately?
 - a. Good debt.
 - b. Bad debt.
 - c. Asset.
 - d. Liability.
- Ans: b, LO: 2.4, Section 2.4, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 61. Which of the following does a budget include?
 - a. Assets.
 - b. Income only.
 - c. Expenses only.
 - d. Income and expenses.
- Ans: d, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 62. Which of the following is the first step of resource management?
 - a. Track where your resources come from.
 - b. Track where your resources are being used.
 - c. Set and know your financial goals.
 - d. Develop your own guidelines regarding the use of your resources.
- Ans: c, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 63. In managing your household financial resources, what should you know in order to determine how much you're really earning and spending?
 - a. Where your money for day-to-day expenses is coming from and where it is going.
 - b. Where your longer-term goal implementation is coming from and where it is going.
 - c. Your cash flows, by systematically tracking your income and expenses.
 - d. All of these answer choices are correct.
- Ans: d, LO: 2.5, Section 2.5, Bloom: C, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
- 64. After tracking where your resources come from and how they are used, what tool can be used to help you manage your financial resources?
 - a. A budget.
 - b. A cash flow statement.
 - c. An income & expense statement.
 - d. All of these answer choices are correct.
- Ans: d, LO: 2.5, Section 2.5, Bloom: C, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 65. When setting your goals, which factors should you consider in order to make a meaningful decision?
 - a. Your personal attitudes.
 - b. Your personal perceptions.
 - c. Your personal preferences.
 - d. All of these answer choices are correct.
- Ans: d, LO: 2.5, Section 2.5, Bloom: C, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 66. Which of the following can be used for tracking?
 - a. Computer spreadsheet.
 - b. Pen and paper.
 - c. Smartphone app.
 - d. All of these answer choices are correct.
- Ans: d, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 67. Which of the following refers to a financial tool that helps you regulate how quickly, and in what ways, your money is being used so that you can stay focused on accomplishing your goals?
 - a. Budget.
 - b. Balance sheet.
 - c. Spreadsheet.
 - d. Net worth.
- Ans: a, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 68. Which of the following is an element in a budget?
 - a. Income.
 - b. Fixed expenses.
 - c. Variable expenses.
 - d. All of these answer choices are correct.
- Ans: d, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
- 69. Which of the following refers to how much you think you will receive or spend in each category?
 - a. Fair market value.
 - b. Projection.
 - c. Liquidity.
 - d. Budget.
- Ans: b, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 70. Which of the following includes all resources that can be saved or spent?
 - a. Expense.

- b. Income.
- c. Variable asset.
- d. Liability.

Ans: b, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 71. Which of the following means that you have planned well and have your money working for you?
 - a. Surplus.
 - b. Deficit.
 - c. Net worth.
 - d. Asset.

Ans: a, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 72. Which of the following means that your expenses exceed your income?
 - a. Surplus.
 - b. Deficit.
 - c. Net worth.
 - d. Asset.

Ans: b, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 73. Which ratio indicates the percentage of money that you are setting aside on a regular basis?
 - a. Consumer debt-to-income ratio.
 - b. Total debt-to-income ratio.
 - c. Savings ratio.
 - d. Emergency fund ratio.

Ans: c, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 74. Which ratio indicates what percentage of your income that you are using to pay all of your debts?
 - a. Consumer debt-to-income ratio.
 - b. Total debt-to-income ratio.
 - c. Savings ratio.
 - d. Emergency fund ratio.

Ans: b, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- $75. \ Which \ ratio \ indicates \ whether \ you \ have \ sufficient \ resources \ in \ case \ of \ an \ emergency?$
 - a. Consumer debt-to-income ratio.
 - b. Total debt-to-income ratio.
 - c. Savings ratio.

- d. Emergency fund ratio.
- Ans: d, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 76. Which of the following is an element of a financial plan?
 - a. Financial knowledge.
 - b. Financial experience.
 - c. Risk tolerance.
 - d. All of these answer choices are correct.
- Ans: d, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
- 77. Which of the following is the first step in creating a financial plan?
 - a. What is your starting point?
 - b. What is your financial score?
 - c. What is your goal?
 - d. What is your financial capacity?
- Ans: c, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 78. Which of the following is the third step in creating a financial plan?
 - a. What is your starting point?
 - b. What is your financial score?
 - c. What is your goal?
 - d. What is your financial capacity?
- Ans: b, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 79. Which of the following will provide you with a realistic understanding of your current risk tolerance, financial knowledge, and feelings of control?
 - a. Credit score.
 - b. Net worth.
 - c. Surplus.
 - d. Financial score.
- Ans: d, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none
 - 80. Which of the following refers to the ability to keep moving forward toward goal achievement even if you face a few financial challenges or emergencies along the way?
 - a. Financial literacy.
 - b. Financial capacity.
 - c. Financial score.
 - d. Financial ability.

Ans: b, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 81. Which of the following is fluid over time?
 - a. Financial knowledge.
 - b. Financial capacity.
 - c. Time horizon.
 - d. Feelings of control and time horizon.

Ans: d, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 82. Which of the following is the final step in creating a financial plan?
 - a. What is your starting point?
 - b. What is your financial score?
 - c. What is your goal?
 - d. Formalize and implement your financial plan.

Ans: d, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 83. Which of the following is the fourth step in creating a financial plan?
 - a. What is your starting point?
 - b. What is your financial score?
 - c. What is your goal?
 - d. What is your financial capacity?

Ans: d, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 84. Which of the following is the fifth step in creating a financial plan?
 - a. What is your starting point?
 - b. How realistic is your time horizon?
 - c. What is your goal?
 - d. What is your financial capacity?

Ans: b, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 85. Which of the following refers to having a financial score less than 10?
 - a. Excellent job of managing financial behaviors.
 - b. Good job of managing financial behaviors.
 - c. Acceptable job of managing financial behaviors.
 - d. Some difficulty in managing financial behaviors.

Ans: d, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 86. Which of the following refers to having a financial score of 11–15?
 - a. Excellent job of managing financial behaviors.

- b. Good job of managing financial behaviors.
- c. Acceptable job of managing financial behaviors.
- d. Some difficulty in managing financial behaviors.

Ans: c, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 87. Which of the following refers to having a financial score of 16–20?
 - a. Excellent job of managing financial behaviors.
 - b. Good job of managing financial behaviors.
 - c. Acceptable job of managing financial behaviors.
 - d. Some difficulty in managing financial behaviors.

Ans: b, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 88. Which of the following refers to having a financial score greater than 20?
 - a. Excellent job of managing financial behaviors.
 - b. Good job of managing financial behaviors.
 - c. Acceptable job of managing financial behaviors.
 - d. Some difficulty in managing financial behaviors.

Ans: a, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 89. Your financial document is a(n) _____ document.
 - a. rigid
 - b. flexible
 - c. simple
 - d. unrealistic

Ans: b, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 90. Which of the following is the second step in creating a financial plan?
 - a. What is your starting point?
 - b. How realistic is your time horizon?
 - c. What is your goal?
 - d. What is your financial capacity?

Ans: a, LO: 2.6, Section 2.6, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

91. What are the total current assets?

Family's Assets and Liabilities	
Checking account	\$3,000
Savings account	\$13,000

Credit card account	\$5,500
Utility bill	\$500
Home	\$320,000
Mortgage (30 years)	\$210,000
Car	\$25,000
Car loan (60 months)	\$18,000
Student loan (7 years)	\$25,000
Household items	\$15,000
Retirement account	\$64,000
Other assets	\$39,000

- a. \$16,000.
- b. \$21,500.
- c. \$31,000.
- d. \$55,000.

Ans: a, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution: Current assets = Checking account [3,000] + savings account [13,000] = 16,000

92. What are the total assets?

Family's Assets and Liabilities		
Checking account	\$3,000	
Savings account	\$13,000	
Credit card account	\$5,500	
Utility bill	\$500	
Home	\$320,000	
Mortgage (30 years)	\$210,000	
Car	\$25,000	
Car Ioan (60 months)	\$18,000	
Student Ioan (7 years)	\$25,000	
Household items	\$15,000	
Retirement account	\$64,000	
Other assets	\$39,000	

- a. \$400,000.
- b. \$415,000.
- c. \$464,000.

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d. \$479,000.

Ans: d, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution: Total assets = checking account [3,000] + savings account [13,000] + car [25,000] + home [320,000] + household items [15,000] + retirement account [64,000] + other assets [39,000] = \$479,000

93. What are the total current liabilities?

Family's Assets and Liabilities		
Checking account	\$3,000	
Savings account	\$13,000	
Credit card account	\$5,500	
Utility bill	\$500	
Home	\$320,000	
Mortgage (30 years)	\$210,000	
Car	\$25,000	
Car loan (60 months)	\$18,000	
Student Ioan (7 years)	\$25,000	
Household items	\$15,000	
Retirement account	\$64,000	
Other assets	\$39,000	

- a. \$500.
- b. \$5,500.
- c. \$6,000.
- d. \$24,000.

Ans: c, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution: Current liabilities are short-term debts, meaning they are due within a year.

eCurrent liabilities = utility bill [500] + credit card account [5,500] = 6,000

94. What are the long-term liabilities?

Family's Assets and Liabilities	
Checking account	\$3,000
Savings account	\$13,000
Credit card account	\$5,500
Utility bill	\$500
Home	\$320,000
Mortgage (30 years)	\$210,000
Car	\$25,000
Car Ioan (60 months)	\$18,000
Student Ioan (7 years)	\$25,000
Household items	\$15,000
Retirement account	\$64,000
Other assets	\$39,000

- a. \$228,000.
- b. \$235,000.
- c. \$253,000.
- d. \$258,500.

Ans: c, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none,

IMA: none

Solution: Long-term liabilities = car loan [18,000] + student loan [25,000] + mortgage [210,000] =

95. What are the total liabilities?

Family's Assets and Liabilities	
Checking account	\$3,000
Savings account	\$13,000
Credit card account	\$5,500
Utility bill	\$500
Home	\$320,000
Mortgage (30 years)	\$210,000
Car	\$25,000
Car Ioan (60 months)	\$18,000
Student Ioan (7 years)	\$25,000
Household items	\$15,000
Retirement account	\$64,000
Other assets	\$39,000

a. \$253,000.

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- b. \$258,500.
- c. \$259,000.
- d. \$274,000.

Ans: c, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution:

Total Liabilities = utility bill [500] + credit card account [5,500] + car loan [18,000] + student loan [25,000] + mortgage [210,000] = \$259,000

96. What is the net worth?

Family's Assets and Liabilities		
Checking account	\$3,000	
Savings account	\$13,000	
Credit card account	\$5,500	
Utility bill	\$500	
Home	\$320,000	
Mortgage (30 years)	\$210,000	
Car	\$25,000	
Car Ioan (60 months)	\$18,000	
Student Ioan (7 years)	\$25,000	
Household items	\$15,000	
Retirement account	\$64,000	
Other assets	\$39,000	

- a. \$141,500.
- b. \$162,000.
- c. \$190,000.
- d. \$220,000.

Ans: d, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula: $\underline{\mathbf{n}}\underline{\mathbf{N}}$ et worth = $\underline{\mathbf{t}}\underline{\mathbf{T}}$ otal assets - $\underline{\mathbf{t}}\underline{\mathbf{T}}$ otal liabilities

Solution: Total assets = checking account [3,000] + savings account [13,000] + car [25,000] + home [320,000] + household items [15,000] + retirement account [64,000] + other assets [39,000] = \$479,000

Total Liabilities = utility bill [500] + credit card account [5,500] + car loan [18,000] + student loan [25,000] + mortgage [210,000] = \$259,000

Net Worth = total assets [479,000] – total liabilities [259,000] = \$220,000

97. What is the debt ratio?

Family's Assets and Liabilities	
Checking account	\$3,000
Savings account	\$13,000
Credit card account	\$5,500
Utility bill	\$500
Home	\$320,000
Mortgage (30 years)	\$210,000
Car	\$25,000
Car loan (60 months)	\$18,000
Student Ioan (7 years)	\$25,000
Household items	\$15,000
Retirement account	\$64,000
Other assets	\$39,000

- a. 54.1%.
- b. 59.1%.
- c. 61.0%.
- d. 64.6%.

Ans: a, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula: Debt ratio = $\frac{\text{Total liabilities}}{\text{Total assets}}$

Solution:

Total Liabilities = utility bill [500] + credit card account [5,500] + car loan [18,000] + student loan [25,000] + mortgage [210,000] = \$259,000

Total assets = checking account [3,000] + savings account [13,000] + car [25,000] + home [320,000] + household items [15,000] + retirement account [64,000] + other assets [39,000] = \$479,000

 $Debt\ ratio = \frac{total\ liabilities\ [259,000]}{total\ assets\ [479,000]} = 0.541 \sim \textbf{54.1}\%$

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98. What is the current ratio?

Family's Assets and Liabilities	
Checking account	\$3,000
Savings account	\$13,000
Credit card account	\$5,500
Utility bill	\$500
Home	\$320,000
Mortgage (30 years)	\$210,000
Car	\$25,000
Car loan (60 months)	\$18,000
Student loan (7 years)	\$25,000
Household items	\$15,000
Retirement account	\$64,000
Other assets	\$39,000

a. 1.68.

b. 2.29.

c. 2.67.

d. 3.91.

Ans: c, LO: 2.4, Section 2.4, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula: Current ratio = $\frac{Current \ assets}{Current \ liabilities}$

Solution: Current Aassets = Cehecking Aaccount [3,000] + Savings Aaccount [13,000] = 16,000 Current Lijabilities = Uutility Bbill [500] + Ceredit Ceard Aaccount [5,500] = \$6,000

Current ratio = $\frac{\text{current assets } [16,000]}{\text{current liabilities } [6,000]} = 2.67$

99. What is the total income?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600

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Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. \$115,000.
- b. \$117,150.
- c. \$127,000.
- d. \$129,150.

Ans: b, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none,

IMA: none

Solution: Total Lincome = Lemployment wages [115,000] + Linterest earned [950] + dividends earned [1,200] = 117,150

100. What are the total fixed expenses?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

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- a. \$81,950.
- b. \$85,550.
- c. \$93,950.
- d. \$97,550.

Ans: d, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution:

Total fixed expenses = mortgage [38,600] + auto loan [3,300] + student loan payments [9,000] + taxes [31,050] + utilities [3,600] + personal savings [12,000] = \$97,550

101. What are the total variable expenses?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. \$19,700.
- b. \$23,300.
- c. \$31,700.
- d. \$35,300.

Ans: a, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution:

Total variable expenses = gas [3,500] + groceries [7,200] + entertainment [6,000] + charitable donations [500] + clothing [1,500] + travel [1,000] = \$19,700

102. What are the total expenses?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. \$105,250.
- b. \$106,200.
- c. \$108,250.
- d. \$117,250.

Ans: d, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Solution:

Total expenses = mortgage [38,000] + auto loan [3,300] + student loan payments [9,000] + taxes [31,050] + utilities [3,600] + personal savings [12,000] + gas [3,500] + groceries [7,200] + entertainment [6,000] + charitable donations [500] + clothing [1,500] + travel [1,000] = \$117,250

103. What is the surplus or deficit?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. -\$2,000.
- b. -\$100.
- c. \$22,000.
- d. \$23,900.

Ans: b, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula: $\frac{\text{Surplus}}{\text{Deficit}} = \text{Total income} - \text{Total expenses}$

Solution:

Total income = employment wages [115,000] + interest earned [950] + dividends earned [1,200] = \$117,150

Total expenses = mortgage [38,000] + auto loan [3,300] + student loan payments [9,000] + taxes [31,050] + utilities [3,600] + personal savings [12,000] + gas [3,500] + groceries [7,200] + entertainment [6,000] + charitable donations [500] + clothing [1,500] + travel [1,000] = \$117,250

 $\frac{\text{Surplus}}{\text{Deficit}} = \text{total income } [117,150] - \text{total expenses } [117,250] = -\$100 \sim \text{Deficit of } \100

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If positive, it is a surplus. If negative, it is a deficit.

104. What is the savings ratio?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. 10.24%.
- b. 10.33%.
- c. 10.35%.
- d. 10.43%.

Ans: a, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula:

 $Savings\ ratio = \frac{[Household\ (or\ personal)\ savings + Employer\ contributions\ to\ retirement\ plan]}{Total\ (or\ gross)\ income}$

Solution: Personal savings [12,000]

Total Lincome = Lemployment wages [115,000] + Linterest earned [950] + dividends earned [1,200] = 117,150

Savings ratio = $\frac{\text{personal savings } [12,000]}{\text{total income } [117,150]} = 0.1024 \sim 10.24\%$

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105. What is the debt-to-income ratio?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. 39.41%.
- b. 43.45%.
- c. 46.52%.
- d. 53,69%.

Ans: b, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula: Debt-to-income ratio = $\frac{Total\ debt\ payments}{Total\ (or\ gross)\ income}$

Solution: Total debt payments = $\frac{M_{mo}}{M_{mo}}$ rtgage [38,600] $\frac{1}{12}$ auto loan [3,300], $\frac{1}{12}$ and student loan payments [9,000] = $\frac{5}{12}$ 50,900

Total Income (or Ggross Income) income = Eemployment wages [115,000] + Interest earned [950] + dividends earned [1,200] = 17.150

Debt-to-income ratio = $\frac{\text{total debt payments } [50,900]}{\text{total income } [117,150]} = 0.4345 \sim 43.45\%$

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106. What is the consumer debt-to-income ratio?

ITEM DESCRIPTION	
Employment wages	\$115,000
Interest earned	\$950
Dividends earned	\$1,200
Mortgage payments	\$38,600
Auto loan payments	\$3,300
Student loan payments	\$9,000
Taxes	\$31,050
Utilities	\$3,600
Personal savings	\$12,000
Gas	\$3,500
Groceries	\$7,200
Entertainment	\$6,000
Charitable donations	\$500
Clothing	\$1,500
Travel	\$1,000

- a. 10.50%.
- b. 10.70%.
- c. 39.41%.
- d. 43.45%.

Ans: a, LO: 2.5, Section 2.5, Bloom: A, Difficulty: Medium, Min: 3, AACSB: none, AICPA FC: none, IMA: none

Formula: Consumer debt-to-income ratio = $\frac{\text{Consumer debt payments}}{\text{Total (or gross) income}}$

Solution: Consumer Debt Ppayments = auto loan [3,300], and student loan payments [9,000] = 12,300

Total Lincome = Lemployment wages [115,000] + Linterest earned [950] + dividends earned [1,200] = 117,150

Consumer debt-to-income ratio = $\frac{\text{consumer debt payments } [12,300]}{\text{total income } [117,150]} = 0.1050 \sim 10.50\%$

107. Jack and Jill are proud new parents. They met while students at Ivy University and already have visions of their new child attending their alma mater in 18 years. Total

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tuition, room, and board is about \$70,000 today, where it was only \$27,000 when they graduated 15 years ago. They can expect to receive a long-term average annual return of 8% in their investment portfolio. Approximately how much would they have to save monthly starting now to have the tuition, room, and board (4-year degree) for their new child by freshman year?

- a. \$1,513.
- b. \$1,830.
- c. \$2,330.
- d. \$2,539.

Ans: b, LO: 2.3, Section 2.3, Bloom: S, Difficulty: Difficult, Min: 10, AACSB: none, AICPA FC: none,

IMA: none Solution:

Step 1: Calculate the rate of price growth (i).

Financial Calculator Inputs (TI BAII Plus)

PV = -27,000 (negative because cash-flow out)

FV = 70,000

N = 15

CPT I = 6.56%

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

$$FV_n = PV (1+i)^n$$

 $$70,000 = $27,000 (1+i)^{15}$

$$\frac{\$70,000}{\$27,000} = (1+i)^{15}$$

$$\frac{1}{$27.000} = (1+i)$$

$$2.59259 = (1+i)^{15}$$

$$1.06557 = 1 + i$$

I = 0.06557 or 6.56%

Excel Spreadsheet

- = RATE(nper, pmt, -pv, fv)
- = RATE(15, 0, -27,000, 70,000)

RATE = 6.56%

Step 2: Calculate the future value of a lump sum.

Financial Calculator Inputs (TI BAII Plus)

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PV = -280,000 (negative because cash-flow out) – each year of college costs \$70,000 and \$70,000 \times 4 = \$280,000 | Field Code Changed

N = 18 (years until the child starts college)

I = 6.56

CPT FV = \$878,726.74

Note: Entry requirements may vary slightly for other financial calculators.

Future Value of a Lump Sum Formula

 $FV_n = PV(1+i)^n$

 $FV_n = $280,000(1+0.656)^{18}$

 $FV_n = $280,000 \times 3.13831$

 $FV_n = $878,726.80$

Excel Spreadsheet

= FV(rate, nper, pmt, -pv)

= FV(0.0656, 15, 0, -280, 000)

FV = \$878, 292.48

Step 3: Calculate the future value of an annuity payment.

Financial Calculator Inputs (TI BAII Plus)

PV = 0

 $N = 216 (18 \text{ years} \times 12 \text{ months})$

$$I = 0.667 \left(\frac{8\% \text{ average annual return}}{12 \text{ months}} \right)$$

FV = -878,726.74 (negative because cash-flow out)

CPT PMT = \$1,829.55

Note: Entry requirements may vary slightly for other financial calculators.

The Future Value of an Annuity

$$FVA = \frac{PMT}{I}[(1+I)^N - 1]$$

 $\$878,726.74 = \frac{\text{PMT}}{0.00667}[(1+0.00667)^{216} - 1]$

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$$$878,726.74 = \frac{PMT}{0.00667}[4.20358 - 1]$$

$$\$878,726.74 = \frac{\text{PMT}}{0.00667} \times 3.20358$$

\$878,726.74 \(^10.00667 = 3.20358 \) PMT

5,861.11 = 3.20358 PMT

PMT =
$$\frac{5,861.11}{3.20358}$$
 = \$1,829.55 ~ \$1,830 monthly payments

Excel Spreadsheet

- = PMT(rate, nper, PV, -FV)
- = PMT(0.00667, 216, 0, -878272.48)

PMT = \$1,829.45

108. Bill is looking to purchase a \$30,000 new car with 2% APR financing over 5 years. If he were to pay 20% out of pocket and finance the balance in equal monthly payments, what would be his approximate total cost of financing?

- a. \$1,240.
- b. \$1,447.
- c. \$3,233.
- d. \$3,772.

Ans: a, LO: 2.3, Section 2.3, Bloom: S, Difficulty: Difficult, Min: 10, AACSB: none, AICPA FC: none, IMA: none

Solution: The amount financed or initial principal is 80% of the car price [24,000]. The monthly periodic interest rate is the APR divided by 12 months [0.16667%]. The total number of payments is 5 years multiplied by 12 months [60].

Financial Calculator Inputs (TI BAII Plus)

PV = -24,000 (negative because cash-flow out)

FV= 0

I = 0.16667

N = 60

CPT PMT = 420.67

Note: Entry requirements may vary slightly for other financial calculators.

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Payments Formula

PMT = PV
$$\left[\frac{(I * (1+I)^N)}{(1+I)^N - 1} \right]$$

PMT = 24,000
$$\left[\frac{(0.001667 \times 1.10510)}{(1.10510 - 1)} \right]$$

$$PMT = 24,000 \left[\frac{0.00184}{0.10510} \right]$$

 $PMT = 24,000 \times 0.01751 = \420.24

Excel Spreadsheet

=PMT(rate, nper, -pv, fv)

=PMT(0.0016667,60,-24000,0)

PMT = 420.67

60 monthly payments of 420.67 = \$25,240.20

Total amount borrowed = \$24,000

Total payments [25,240] less total borrowed [24,000] = total finance cost = \$1,240

- 109. Which of the following is true about tracking your expenses?
 - a. Many spending habits are so routine that their cumulative impact is not fully recognized.
 - b. Tracking your expenses helps expose spending patterns and their impact.
 - c. Once you're fully aware of expenses, you can make changes that will save you money over time.
 - d. All of these answer choices are correct.

Ans: d, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

- 110. More trips to the store will typically result in _____ money spent.
 - a. less
 - b. more
 - c. no difference
 - d. There is not enough information to determine the answer.

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Ans: b, LO: 2.5, Section 2.5, Bloom: K, Difficulty: Easy, Min: 1, AACSB: none, AICPA FC: none, IMA: none

Solution: The more trips you make to the store, the more likely you are to make unplanned additional purchases.