Test Bank for Accounting Tools for Business Decision Making 6th
Edition Kimmel Weygandt Kieso 1119491150 9781119491156

Full link download:

Test Bank:

Solution Manual:

APPENDIX G

TIME VALUE OF MONEY

SUMMARY OF QUESTIONS BY OBJECTIVES AND BLOOM'S TAXONOMY

Item	LO	BT	Item	LO	BT	Item	LO	BT	Item	LO	BT	Item	LO	BT
True-False Statements														
1.	1	K	3.	1	K	5.	2	K	7.	2	C	9.	3	K
2.	1	K	4.	1	C	6.	2	K	8.	3	K	10.	4	K
Multiple Choice Questions														
11.	1	K	17.	1	AP	23.	2	CA	29.	2	AP	35.	2	AP
12.	1	C	18.	1	K	24.	2	PA	30.	2	AP	36.	2	AP
13.	1	AP	19.	1	AP	25.	2	PA	31.	2	AP	37.	2	C
14.	1	K	20.	1	K	26.	2	PA	32.	2	C	38.	2	AP
15.	1	K	21.	2	K	27.	2	P	33.	2	AP	39.	2	AP
16.	1	C	22.	2	C	28.	2	C	34.	2	AP	40.	2	AP
Exercises														
41.	1	AP	47.	1	AP	53.	2	AP	59.	2	AP	65.	2	AP
42.	1	AP	48.	1	AP	54.	2	AP	60.	2	AP	66.	2	AP
43.	1	AP	49.	1	AP	55.	2	AP	61.	2	AP			
44.	1	AP	50.	1	AP	56.	2	AP	62.	2	AP			
45.	1	AP	51.	1	AP	57.	2	AP	63.	2	AN			
46.	1	AP	52.	2	AP	58.	2	AP	64.	2	AP			
Completion Statements														
67.1		K	68.1		K	69.2		K	70.3		K			

SUMMARY OF LEARNING OBJECTIVES BY QUESTION TYPE

Item	Type	Item	Type	Item	Type	Item	Type	Item	Type	Item	Type	Item	Type
Learning Objective 1													
1.	TF	11.	MC	15.	MC	19.	MC	43.	Ex	47.	Ex	51.	Ex
2.	TF	12.	MC	16.	MC	20.	MC	44.	Ex	48.	Ex	67.	C
3.	TF	13.	MC	17.	MC	41.	Ex	45.	Ex	49.	Ex	68.	C
4.	TF	14.	MC	18.	MC	42.	Ex	46.	Ex	50.	Ex		
Learning Objective 2													
5.	TF	22.	MC	28.	MC	34.	MC	40.	MC	57.	Ex	63.	Ex
6.	TF	23.	MC	29.	MC	35.	MC	52.	Ex	58.	Ex	64.	Ex
7.	TF	24.	MC	30.	MC	36.	MC	53.	Ex	59.	Ex	65.	Ex
8.	MC	25.	MC	31.	MC	37.	MC	54.	Ex	60.	Ex	66.	Ex
9.	MC	26.	MC	32.	MC	38.	MC	55.	Ex	61.	Ex	69.	C
21.	MC	27.	MC	33.	MC	39.	MC	56.	Ex	62.	Ex		
Learning Objective 3													
10.	TF	70.	C										

Note: TF = True-False   C = Completion
       MC = Multiple Choice   Ex = Exercise

The chapter also contains one set of five Matching questions.

CHAPTER LEARNING OBJECTIVES

1. ***Compute interest and future values.*** Simple interest is computed on the principal only, while compound interest is computed on the principal and any interest earned that has not been withdrawn.

   To solve for future value of a single amount, prepare a time diagram of the problem. Identify the principal amount, the number of compounding periods, and the interest rate. Using the future value of 1 table, multiply the principal amount by the future value factor specified at the intersection of the number of periods and the interest rate.

   To solve for future value of an annuity, prepare a time diagram of the problem. Identify the amount of the periodic payments (receipts), the number of payments, and the interest rate. Using the future value of an annuity of 1 table, multiply the amount of the payments by the future value factor specified at the intersection of the number of periods and the interest rate.

2. ***Compute present value.*** The following three variables are fundamental to solving present value problems: (1) the future amount, (2) the number of periods, and (3) the interest rate (the discount rate).

   To solve for present value of a single amount, prepare a time diagram of the problem. Identify the future amount, the number of discounting periods, and the discount (interest) rate. Using the present value of a single amount table, multiply the future amount by the present value factor specified at the intersection of the number of periods and the discount rate.

   To solve for present value of an annuity, prepare a time diagram of the problem. Identify the amount of future periodic receipts or payment (annuities), the number of discounting periods, and the discount (interest) rate. Using the present value of an annuity of 1 table, multiply the amount of the annuity by the present value factor specified at the intersection of the number of periods and the interest rate.

   To compute the present value of notes and bonds, determine the present value of the principal amount: Multiply the principal amount (a single future amount) by the present value factor (from the present value of 1 table) intersecting at the number of periods (number of interest payments) and the discount rate. To determine the present value of the series of interest payments: Multiply the amount of the interest payment by the present value factor (from the present value of an annuity of 1 table) intersecting at the number of periods (number of interest payments) and the discount rate. Add the present value of the principal amount to the present value of the interest payments to arrive at the present value of the note or bond.

3. **Use a financial calculator to solve time value of money problems.** Financial calculators can be used to solve the same and additional problems as those solved with time value of money tables. Enter into the financial calculator the amounts for all of the known elements of a time value of money problem (periods, interest rate, payments, future or present value), and it solves for the unknown element. Particularly useful situations involve interest rates and compounding periods not presented in the tables.

TRUE-FALSE STATEMENTS

1. Interest is the difference between the amount borrowed and the principal.

Ans: F, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

2. Compound interest is computed on the principal and any interest earned that has **not** been paid or received.

Ans: T, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

3. The future value of a single amount is the value at a future date of a given amount invested now, assuming compound interest.

Ans: T, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

4. When the periodic payments are **not** equal in each period, the future value can be computed by using a future value of an annuity table.

Ans: F, LO: 1, Bloom: C, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

5. The process of determining the present value is referred to as discounting the future amount.

Ans: T, LO: 2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

6. A higher discount rate produces a higher present value.

Ans: F, LO: 2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

7. In computing the present value of an annuity, it is **not** necessary to know the number of discount periods.

Ans: F, LO: 2, Bloom: C, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

8. The present value of a long-term note or bond is a function of two variables.

Ans: F, LO: 2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

9. The present value of an annuity is the value now of a series of future receipts or payments, discounted assuming compound interest.

Ans: T, LO: 2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Decision Analysis

10. With a financial calculator, one can solve for any interest rate or for any number of periods in a time value of money problem.

Ans: T, LO: 3, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Decision Analysis

Answers to True-False Statements

Item	Ans.	Item	Ans.	Item	Ans.	Item	Ans.	Item	Ans.
1.	F	3.	T	5.	T	7.	F	9.	T
2.	T	4.	F	6.	F	8.	F	10.	T

MULTIPLE CHOICE QUESTIONS

Note: Students will need future value and present value tables for some questions.

11. Compound interest is the return on principal
    a. only.
    b. for one or more periods.
    c. plus interest for two or more periods.
    d. for one period.

Ans: c, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

12. The factor 1.0609 is taken from the 3% column and 2 periods row in a certain table. From what table is this factor taken?
    a. Future value of 1
    b. Future value of an annuity of 1
    c. Present value of 1
    d. Present value of an annuity of 1

Ans: a, LO: 1, Bloom: C, Difficulty: Medium, Min: 1, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

13. If $40,000 is put in a savings account paying interest of 4% compounded annually, what amount will be in the account at the end of 5 years?
    a. $32,878
    b. $48,000
    c. $48,620
    d. $48,666

Ans: d, LO: 1, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

14. The future value of 1 factor will always be
    a. equal to 1.
    b. greater than 1.
    c. less than 1.
    d. equal to the interest rate.

Ans: b, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

15. All of the following are necessary to compute the future value of a single amount **except** the
    a. interest rate.
    b. number of periods.
    c. principal.
    d. maturity value.

Ans: d, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Investment Decision

16. Which table has a factor of 1.00000 for 1 period at every interest rate?
    a. Future value of 1
    b. Future value of an annuity of 1
    c. Present value of 1
    d. Present value of an annuity of 1

17. McGoff Company deposits $20,000 in a fund at the end of each year for 5 years. The fund pays interest of 4% compounded annually. The balance in the fund at the end of 5 years is computed by multiplying
    a. $20,000 by the future value of 1 factor.
    b. $100,000 by 1.04.
    c. $100,000 by 1.20.
    d. $20,000 by the future value of an annuity factor.

18. The future value of an annuity factor for 2 periods is equal to
    a. 1 plus the interest rate.
    b. 2 plus the interest rate.
    c. 2 minus the interest rate.
    d. 2.

19. If $30,000 is deposited in a savings account at the end of each year and the account pays interest of 5% compounded annually, what will be the balance of the account at the end of 10 years?
    a. $48,867
    b. $315,000
    c. $377,337
    d. $450,000

20. Which of the following is **not** necessary to know in computing the future value of an annuity?
    a. Amount of the periodic payments
    b. Interest rate
    c. Number of compounding periods
    d. Year the payments begin

21. In present value calculations, the process of determining the present value is called
    a. allocating.
    b. pricing.
    c. negotiating.
    d. discounting.

23.   Which of the following accounting problems does **not** involve a present value calculation?
    a.   The determination of the market price of a bond.
    b.   The determination of the declining-balance depreciation expense.
    c.   The determination of the amount to report for long-term notes payable.
    d.   The determination of the amount to report for lease liability.

Ans: b, LO: 2, Bloom: C, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Project Management, IMA: Quantitative Methods

24.   If you are able to earn an 8% rate of return, what amount would you need to invest to have $30,000 one year from now?
    a. $27,747
    b. $27,778
    c. $27,273
    d. $29,700

Ans: b, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

25.   If you are able to earn a 15% rate of return, what amount would you need to invest to have $15,000 one year from now?
    a. $14,852
    b. $13,125
    c. $12,750
    d. $13,044

Ans: d, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

26.   If the single amount of $2,000 is to be received in 2 years and discounted at 11%, its present value is
    a. $1,818.
    b. $1,623.
    c. $1,802.
    d. $2,754.

Ans: b, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

27.   If the single amount of $3,000 is to be received in 3 years and discounted at 6%, its present value is
    a. $2,519.
    b. $2,830.
    c. $2,600.
    d. $2,820.

Ans: a, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

28.   Which of the following discount rates will produce the smallest present value?
    a.   8%
    b.   9%
    c.   10%
    d.   4%

Ans: c, LO: 2, Bloom: C, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

29. Suppose you have a winning lottery ticket and you are given the option of accepting $3,000,000 three years from now or taking the present value of the $3,000,000 now. The sponsor of the prize uses a 6% discount rate. If you elect to receive the present value of the prize now, the amount you will receive is
    a. $2,518,860.
    b. $2,591,520.
    c. $2,670,000.
    d. $3,000,000.

Ans: a, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

30. The amount you must deposit now in your savings account, paying 6% interest, in order to accumulate $6,000 for a down payment 5 years from now on a new car is
    a. $1,200.
    b. $4,484.
    c. $4,477.
    d. $4,200.

Ans: b, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

31. The amount you must deposit now in your savings account, paying 5% interest, in order to accumulate $10,000 for your first tuition payment when you start college in 3 years is
    a. $8,500.
    b. $7,830.
    c. $8,638.
    d. $8,860.

Ans: c, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

32. The present value of $10,000 to be received in 5 years will be smaller if the discount rate is
    a. increased.
    b. decreased.
    c. not changed.
    d. equal to the stated rate of interest.

Ans: a, LO: 2, Bloom: C, Difficulty: Easy, Min: 1, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

33. Dexter Company is considering purchasing equipment. The equipment will produce the following cash flows:

Year 1	$120,000
Year 2	$200,000

    Dexter requires a minimum rate of return of 10%. What is the maximum price Dexter should pay for this equipment?
    a. $274,381
    b. $165,290
    c. $320,000
    d. $160,000

Ans: a, LO: 2, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

34.   If Sloane Joyner invests $10,514.81 now and she will receive $30,000 at the end of 11 years, what annual rate of interest will she be earning on her investment?
  a. 8%
  b. 8.5%
  c. 9%
  d. 10%

Ans: d, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

35.   Suzy Douglas has been offered the opportunity of investing $73,540 now. The investment will earn 8% per year and at the end of its life will return $200,000 to Suzy. How many years must Suzy wait to receive the $200,000?
  a. 10
  b. 11
  c. 12
  d. 13

Ans: d, LO: 2, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

36.   Peter Johnson invests $35,516.80 now for a series of $5,000 annual returns beginning one year from now. Peter will earn 10% on the initial investment. How many annual payments will Peter receive?
  a. 10
  b. 12
  c. 13
  d. 15

Ans: c, LO: 2, Bloom: AP, Difficulty: Easy, Min: 1, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

37.   In order to compute the present value of an annuity, it is necessary to know the
      1. discount rate.
      2. number of discount periods and the amount of the periodic payments or receipts.
  a. 1
  b. 2
  c. both 1 and 2
  d. something in addition to 1 and 2

Ans: c, LO: 2, Bloom: C, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

38.   A $10,000, 6%, 5-year note payable that pays interest quarterly would be discounted back to its present value by using tables that would indicate which one of the following period-interest combinations?
  a. 5 interest periods, 6% interest
  b. 20 interest periods, 6% interest
  c. 20 interest periods, 1.5% interest
  d. 5 interest periods, 1.5% interest

Ans: c, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

39.   Hazel Company has just purchased equipment that requires annual payments of $40,000 to be paid at the end of each of the next 4 years. The appropriate discount rate is 15%. What is the present value of the payments?
        a. $114,199
        b. $160,000
        c. $46,975
        d. $150,135

Ans: a, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem
        Solving/Decision Making, IMA: Investment Decision

40.   Perdue Company has purchased equipment that requires annual payments of $30,000 to be paid at the end of each of the next 6 years. The appropriate discount rate is 12%. What amount will be used to record the equipment?
        a. $180,000
        b. $123,342
        c. $165,772
        d. $115,650

Ans: b, LO: 2, Bloom: AP, Difficulty: Medium, Min: 2, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem
        Solving/Decision Making, IMA: FSA

Answers to Multiple Choice Questions

Item	Ans.	Item	Ans.	Item	Ans.	Item	Ans.	Item	Ans.	Item	Ans.
11.	c	16.	b	21.	d	26.	b	31.	c	36.	c
12.	a	17.	d	22.	d	27.	a	32.	a	37.	c
13.	d	18.	b	23.	b	28.	c	33.	a	38.	c
14.	b	19.	c	24.	b	29.	a	34.	d	39.	a
15.	d	20.	d	25.	d	30.	b	35.	d	40.	b

EXERCISES

Ex. 41

Jose Reynolds deposited $10,000 in an account paying interest of 4% compounded annually. What amount will be in the account at the end of 4 years?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC:
        Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 41   (5 min.)

Use Table 1.
$10,000 × 1.16986 (4 periods and 4%) = $11,698.60

Ex. 42

Wingate Company borrowed $90,000 on January 2, 2017. This amount plus accrued interest of 6% compounded annually will be repaid at the end of 3 years. What amount will Wingate repay at the end of the third year?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC:
        Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 42 (5 min.)

Use Table 1.
$90,000 × 1.19102 (3 periods and 6%) = $107,191.80

Ex. 43

Pleasant Company has decided to begin accumulating a fund for plant expansion. The company deposited $80,000 in a fund on January 2, 2013. Pleasant will also deposit $40,000 annually at the end of each year, starting in 2013. The fund pays interest at 4% compounded annually. What is the balance of the fund at the end of 2017 (after the 2017 deposit)?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 8, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 43 (8 min.)

Use Tables 1 and 2.
$80,000 × 1.21665(5 periods and 4%; Table 1) = $ 97,332.00
$40,000 × 5.41632(5 periods and 4%; Table 2) = 216,652.80
Fund Balance at 12-31-17 $313,984.80

Ex. 44

Mandy How plans to buy an automobile and can deposit $3,000 toward the purchase today. If the annual interest rate is 8%, how much can Mandy expect to have as a down payment in 3 years?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 44 (3 min.)

Use Table 1
$3,000 × 1.25971 = $3,779.13.

Ex. 45

Rob Honda plans to buy a home and can deposit $15,000 for the purchase today. If the annual interest rate is 8%, how much can Rob expect to have for a down payment in 5 years?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 45 (5 min.)

Use Table 1
$15,000 × 1.46933 = $22,039.95.

Ex. 46

Bill and Ellen Sweatt plan to invest $2,500 a year in an educational IRA for their granddaughter, Sloane Martin. They will make these deposits on January 2nd of each year. Bill and Ellen feel they can safely earn 8%. How much will be in this account on December 31 of the 18th year?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 46   (5 min.)

Use Table 2
$2,500 × 37.45024 = $93,625.60.

Ex. 47

Bill Cigarettes acquired a bad habit of smoking in high school. Bill spends approximately $70 a month or $840 a year on cigarettes. He is not concerned with health issues, but he is keenly aware of financial issues. Show Bill how much he would have at retirement in 20 years if he invested $840 a year at 8% instead of smoking.

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC:
           Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 47   (5 min.)

Use Table 2
$840 × 45.76196 = $38,440.05.

Ex. 48

Robin Clark has a cell phone that she uses only for emergencies. The cost of the phone is $40 a month. The cellular company is offering unlimited nights and weekends for an additional $10 a month ($120 a year). Robin thinks it would be "cool" to have this benefit and after all $10 a month is not so much. Show Robin how much she will have in 20 years if she invests this $120 a year at 9% instead of accepting the unlimited nights and weekends offer.

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC:
           Problem Solving/Decision Making, IMA: Investment Decision

Solution 48   (5 min.)

Use Table 2
$120 × 51.16012 = $6,139.21.

Ex. 49

Lamb Company deposited $15,000 annually for 6 years in an account paying 5% interest compounded annually. What is the balance of the account at the end of the 6th year?

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC:
           Problem Solving/Decision Making, IMA: Investment Decision

Solution 49   (5 min.)

Use Table 2.
$15,000 × 6.80191 (6 periods and 5%) = $102,028.65

Ex. 51

Compute the future value of $6,000 invested every year at an interest rate of 9%. You invest the money for 20 years with the first payment made at the end of the year.

Ans: N/A, LO: 1, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 51   (5 min.)

Use Table 2
$6,000 × 51.16012 = $306,960.72.

Ex. 52

Flower Company is considering an investment which will return a lump sum of $2,500,000 six years from now. What amount should Flower Company pay for this investment to earn an 11% return?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 52   (5 min.)

Use Table 3.
$2,500,000 × .53464 (6 periods and 11%) = $1,336,600

Ex. 53

Chang Company earns 12% on an investment that will return $400,000 eleven years from now. What is the amount Chang Company should invest now to earn this rate of return?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 53   (5 min.)

Use Table 3.
$400,000 × .28748 (11 periods and 12%) = $114,992

Ex. 54

If Kelly Cranford invests $11,970 now, she will receive $40,000 at the end of 14 years. What annual rate of return will Kelly earn on her investment?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 54   (5 min.)

Use Table 3. Answer: 9%

$11,970 ÷ $40,000 = .29925   Read across the 14-period row in Table 3 to find .29925 in the 9% column.

Ex. 55

Luis Rodriguez wants to buy a car in 3 years. He will need $3,000 for a down payment. The annual interest rate is 9%. How much money must Luis invest today for the purchase?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 55   (5 min.)

Use Table 3
$3,000 × .77218 = $2,316.54.

Ex. 56

Amy Brown plans to buy a surround sound stereo system for $1,100 after 3 years. If the interest rate is 6%, how much money should Amy set aside today for the purchase?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 56   (5 min.)

Use Table 3
$1,100 × .83962 = $923.58.

Ex. 57

(a)   What is the present value of $90,000 due 7 years from now, discounted at 9%?
(b)   What is the present value of $150,000 due 5 years from now, discounted at 12%?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 8, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 57   (8 min.)

Use Table 3.
(a) $90,000 × .54703 (7 periods and 9%) = $49,232.70
(b) $150,000 × .56743 (5 periods and 12%) = $85,114.50

Ex. 58

Kim Black plans to buy a truck for $24,000 after 3 years. If the interest rate is 6%, how much money should Kim set aside today for the purchase?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 58   (3 min.)

Use Table 3.
$24,000 × .83962 = $20,150.88

Ex. 59

DMV leases a building for 20 years. The lease requires 20 annual payments of $12,000 each, with the first payment due immediately. The interest rate in the lease is 10%. What is the present value of the cost of leasing the building?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 59   (3 min.)

Use Table 4.
$12,000 + ($12,000 × 8.36492) = $112,379.04

Ex. 60

Frye Company is considering investing in an annuity contract that will return $50,000 annually at the end of each year for 20 years. What amount should Frye Company pay for this investment if it earns an 8% return?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 60   (3 min.)

Use Table 4.
$50,000 × 9.81815 (20 periods and 8%) = $490,907.50

Ex. 61

Sarah Denny purchased an investment for $40,260.48. From this investment, she will receive $6,000 annually for the next 10 years starting one year from now. What rate of interest will Sarah be earning on her investment?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 4, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 61   (4 min.)

Use Table 4.
Answer: 8%
$40,260.48 ÷ $6,000 = 6.71008 (10 periods and 8%) = 6.71008

Ex. 62

You are purchasing a car for $25,000, and you obtain financing as follows: $2,500 down payment, 12% interest, semiannual payments over 5 years.

Instructions
Compute the payment you will make every 6 months.

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 3, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 62   (3 min.)

Use Table 4.
$25,000 cost – $2,500 down payment = $22,500
Payment × 7.36009 = $22,500
Payment = $22,500/7.36009 = $3,057.03

Ex. 63

Frostmore Company is considering investing in an annuity contract that will return $50,000 annually at the end of each year for 20 years. What amount should Frostmore pay for this investment if it earns an 8% return?

Ans: N/A, LO: 2, Bloom: AN, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Solution 63   (5 min.)

Use Table 4
$50,000 × 9.81815 (20 periods and 8%) = $490,907.50.

Ex. 64

Cecilia Jeffries purchased an investment for $49,090.75. From this investment, she will receive $5,000 annually for the next 20 years starting one year from now. What rate of interest will Cecilia be earning on her investment?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 64   (5 min.)

Use Table 4. Answer: 8%
($49,090.75 ÷ $5,000) = 9.81815   Read across the 20-period row in Table 4 to find 9.81815 in the 8% column.

Ex. 65

Lucky Lou has just won the lottery and will receive an annual payment of $100,000 every year for the next 20 years. If the annual interest rate is 8%, what is the present value of the winnings?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 65   (5 min.)

Use Table 4
$100,000 × 9.81815 = $981,815.

Ex. 66

CVS leases a building for 20 years. The lease requires 20 annual payments of $10,000 each, with the first payment due immediately. The interest rate in the lease is 10%. What is the present value of the cost of leasing the building?

Ans: N/A, LO: 2, Bloom: AP, Difficulty: Medium, Min: 5, AACSB: Analytic, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

Solution 66   (5 min.)

Use Table 4
$10,000 + ($10,000 × 8.36492) = $93,649.20.

COMPLETION STATEMENTS

67.   Payments or receipts of equal dollar amounts are referred to as   .

Ans: N/A, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Business Economics

68.   The   of an annuity is the sum of all the payments plus the accumulated compound interest on them.

Ans: N/A, LO: 1, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Business Economics

69.   The process of determining the present value is referred to as   the future amount.

Ans: N/A, LO: 2, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Quantitative Methods

70.   The   of a long-term note or bond is a function of three variables.

Ans: N/A, LO: 3, Bloom: K, Difficulty: Easy, Min: 1, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Business Economics

Answers to Completion Statements

67.   annuities
68.   future value
69.   discounting
70.   present value (or market price)

MATCHING

71.   Match the items below by entering the appropriate code letter in the space provided.

A. Compound interest   D. Present value of a single amount
B. Future value of a single amount   E. Present value of an annuity
C. Future value of an annuity

_____1. The value today of a future amount to be received or paid.

_____2. The value at a future date of a given amount invested.

_____3. Return on principal plus interest for two or more periods.

_____4. Value today of a series of future amounts to be received or paid.

_____5. The sum of all the payments or receipts plus the accumulated compound interest on them.

Ans: N/A, LO: 1, Bloom: K, Difficulty: Easy, Min: 3, AACSB: Reflective Thinking, AICPA BB: Resource Management, AICPA FC: Measurement, AICPA PC: Problem Solving/Decision Making, IMA: Investment Decision

Answers to Matching

1. D   4. E
2. B   5. C
3. A