Personal Finance: An Integrated Planning Approach, 8e **(Frasca)**
Chapter 2 The Time Value of Money: All Dollars Are Not Created Equal

1) Compounding refers to the
    A) mistake of confusing present values with future values.
     B) process of accumulating value over time.
    C) task of finding a present value.
    D) projection of future payments.
   Answer: B
   Diff: 1
   Topic: Interest compounding

2) Assuming positive interest rates, a present value of $1,000
    A) is always more desirable to a future value of $1,000.
     B) is always less desirable than a future value of $1,000.
    C) is no more or no less desirable than a future value of $1,000.
    D) You can't answer without more information.
   Answer: A
   Diff: 1
   Topic: Interest compounding

3) Given recent market experience a dollar today is worth
    A) more than a dollar five years from now.
     B) less than a dollar five years from now.
    C) about the same as a dollar five years from now.
    D) more or less than a dollar five years from now.
   Answer: A
   Diff: 1
   Topic: Economic trends

4) You have just put $1,000 in an investment that offers a 12% annual yield, using a <u>simple</u>
   <u>interest</u> calculation. At the end of <u>two</u> years your interest earned will be
    A) $120.00.
     B) $144.00.
    C) $240.00.
    D) $254.40.
   Answer: C
   Diff: 1
   Topic: Interest compounding

5) You have just put $500 in an investment that offers an 8% annual yield, with interest
   compounded annually. Your total interest earned after two years will be
    A) $83.20.
     B) $80.00.
    C) $44.60.
    D) $40.00.
   Answer: A
   Diff: 2
   Topic: Interest compounding

6) At 12% interest (compounded annually), $20,000 invested today will grow to $_____ in three years.
   A) 27,200
   B) 28,099
   C) 31,471
   D) 40,000
   Answer: B
   Diff: 1
   Topic: Future value

7) You have just put $5,000 into an investment that offers a 10% annual yield, using a <u>simple interest</u> calculation. At the end of two years your interest earned will be
   A) $500.
   B) $550.
   C) $1,000.
   D) $1,100.
   Answer: C
   Diff: 2
   Topic: Interest compounding

8) You have just put $5,000 into an investment that offers a 10% annual yield, with interest compounded annually. Your total interest earned after two years will be
   A) $550.
   B) $1,000.
   C) $1,050.
   D) $1,100.
   Answer: C
   Diff: 2
   Topic: Interest compounding

9) The text discusses the topic of compounding over a large number of compounding periods. To illustrate, it shows that $1,000 invested at 8% for 40 years (annual compounding) grows to $21,724. But if you could earn 10% instead of 8%, you would earn _____ **more** at the end of 40 years.
   A) $4,431
   B) 25 percent
   C) $23,535
   D) $1,250
   Answer: C
   Diff: 3
   Topic: Interest compounding

10) The future value of $12,000 invested today at 6% interest compounded annually for 4 years is
   A) $23,259.
   B) $15,150.
   C) $12,190.
   D) $9,505.
   Answer: B
   Diff: 1
   Topic: Future value

11) The future value of $5,000 invested today at 3% interest compounded annually for 5 years is
    A) $5,255.
    B) $5,520.
    C) $5,628.
    D) $5,796.
    Answer: D
    Diff: 3
    Topic: Future value

12) You expect a 3% rate of inflation to continue indefinitely into the future. A $10,000 vacation today will cost $_____ twenty years from now. (Table or calculator required.)
    A) 10,300
    B) 14,988
    C) 18,061
    D) 42,944
    Answer: C
    Diff: 3
    Topic: Future value

13) You are deciding whether to start a 40-year retirement investing plan now, or ten years from now. You think rates of return will be about the same in the future as they are now. Discussion in the text of this decision shows
    A) very little difference in the future value of an investment made now versus one made 10 years from now.
    B) an investment made now will accumulate about 20% more (at a 10% rate of interest, compounded annually) than the investment made later.
    C) the same facts as in response b, but the accumulation is only 10% greater.
    D) that you will accumulate more in the additional 10 years than you do for the first 30 years.
    Answer: D
    Diff: 2
    Topic: Interest compounding

14) With an interest rate of 9%, $5,000 will grow to $10,000 in approximately
    A) 8 years.
    B) 4 years.
    C) 12 years.
    D) 24 years.
    Answer: A
    Diff: 1
    Topic: Rule of 72

15) If you wish to double your money in 6 years, you must earn an interest rate of about
    A) 8%.
    B) 24%.
    C) 12%.
    D) 36%.
    Answer: C
    Diff: 1
    Topic: Rule of 72

16) At an interest rate of 10% it will take approximately how many years to double your investment?
    A) Less than five years
    B) Between 7 and 8 years
    C) Between 9 and 10 years
    D) More than 10 years
    Answer: B
    Diff: 1
    Topic: Rule of 72

17) An annuity is
    A) a sum received in the future.
    B) a sum earned in the future but received now.
    C) a series of unequal payments.
    D) a series of equal payments.
    Answer: D
    Diff: 1
    Topic: Annuities

18) In relation to an ordinary annuity paid in any given year, an annuity due is
    A) a larger amount.
    B) a smaller amount.
    C) an equal amount.
    D) an unrelated amount.
    Answer: A
    Diff: 1
    Topic: Annuities

19) The future value of a $500 ordinary annuity received for three years is $_____ , assuming an investment rate of 10%:
    A) 1,655.00
    B) 665.50
    C) 1,820.50
    D) 335.65
    Answer: A
    Diff: 3
    Topic: Annuities

20) The future value of a $500 annuity due received for three years is $_____, assuming an investment rate of 10%.
    A) 1,655.00
    B) 665.50
    C) 1,820.50
    D) 335.65
    Answer: C
    Diff: 3
    Topic: Annuities

21) You will need $228,790 in 28 years to supplement your retirement funds. If you can earn 8% interest, you must save $_____ each year. (Table or calculator required.)
 A) 8,100
 B) 6,300
 C) 3,600
 D) 2,400
Answer: D
Diff: 3
Topic: Future value

22) An ordinary annuity assumes _____-of-period payments, while an annuity due assumes _____-of-period payments.
 A) end; beginning
 B) beginning; end
 C) end; middle
 D) beginning; middle
Answer: A
Diff: 2
Topic: Annuities

23) Assuming a discount rate of 10%, the present value of $1,000 received one year from now is
 A) $1,100.00.
 B) $1,900.00.
 C) $909.09.
 D) $990.00.
Answer: C
Diff: 3
Topic: Present value

24) Assuming a discount rate of 10%, the present value of $1,000 received two years from now is
 A) $800.00.
 B) $826.45.
 C) $899.90
 D) $900.00
Answer: B
Diff: 3
Topic: Present value

25) You will buy a lottery ticket. If you win, you have a choice of receiving $995,000 now or three equal end-of-year payments of $400,000. You should *take* the payments
 A) because $1,200,000 is greater than $995,000.
 B) if you earn 20% or more on your investments.
 C) if you earn 11% or more on your investments.
 D) if you earn less than 10% on your investments.
Answer: D
Diff: 3
Topic: Present value

26) An annuity contract will pay you $4,000 a year (end of year) for the next three years. Or, you can choose to receive $12,610 at the end of the third. Assuming that you can earn 8% on investments, you should
    A) choose to receive the $4,000 annuity payments.
    B) choose to receive the $12,610 payment.
    C) flip a coin to make the choice; each is equally attractive.
    D) flip a coin to make the choice; each is equally unattractive.
Answer: A
Diff: 3
Topic: Annuities

27) Which item below is **not** associated with goal planning?
    A) Constructing a budget
    B) Adjusting for inflation
    C) Making goals concrete
    D) Determining a savings schedule
Answer: A
Diff: 1
Topic: Planning

28) Generally speaking, planners can usually seek higher return investments to meet
    A) short-term goals.
    B) long-term goals.
    C) goals of any term.
    D) dreams, but not goals.
Answer: B
Diff: 2
Topic: Planning

29) A savings schedule with a zero ending balance means that
    A) annual deposits are sufficient to meet all goals.
    B) more savings are needed each year.
    C) the most desirable schedule has been determined.
    D) some goals will not be achieved.
Answer: A
Diff: 2
Topic: Planning

30) Young people most likely prefer a savings schedule with
    A) a zero ending balance.
    B) increasing annual deposits.
    C) decreasing annual deposits.
    D) negative balances in the early years.
Answer: B
Diff: 2
Topic: Planning

31) Compounding is the process of increasing present value to future values.
Answer: TRUE
Diff: 1
Topic: Interest compounding

32) Discounting is the process of reducing future values to present values.
  Answer: TRUE
  Diff: 1
  Topic: Present value

33) The present value of $500 received at the end of each of the next three years is $1,243 (assuming a 10% interest rate).
  Answer: TRUE
  Diff: 2
  Topic: Present value

34) You invest $100 today in a two-year certificate of deposit that pays a 10% annual interest rate compounded annually. At maturity, your CD will give you $120.
  Answer: FALSE
  Diff: 1
  Topic: Interest compounding

35) A simple interest calculation assumes you reinvest all interest earned in the investment.
  Answer: FALSE
  Diff: 1
  Topic: Interest compounding

36) Looking at a future value of $1 table, you find the number 4.661 for 20 years and 8%. This means that a dollar invested today will grow to $4.661 at the end of 20 years.
  Answer: TRUE
  Diff: 1
  Topic: Future value

37) Compounding is the process of increasing present value to future value.
  Answer: TRUE
  Diff: 1
  Topic: Interest compounding

38) At an 8% rate, you must invest $5,000 to have $10,000 in about 6 years.
  Answer: FALSE
  Diff: 2
  Topic: Future value

39) At a 12% interest rate, $2,000 invested today will be worth approximately $8,000 in about 12 years.
  Answer: TRUE
  Diff: 2
  Topic: Future value

40) You can double your investment in 6 years if you can earn 12% on your investments.
  Answer: TRUE
  Diff: 2
  Topic: Rule of 72

41) John cashed in an annuity contract and received $10,000. John bought the contract 24 years ago for $5,000. These amounts indicate a contract rate of approximately 3%.
  Answer: TRUE
  Diff: 3
  Topic: Interest compounding

42) The future value of $500 invested at the end of each of the next three years is $1,555 (assuming a 10% interest rate).
Answer: FALSE
Diff: 2
Topic: Future value

43) Given identical data, the future value of an ordinary annuity is greater than the future value of an annuity due.
Answer: FALSE
Diff: 1
Topic: Annuities

44) If the future value of an ordinary annuity is $8,000, the future value of an annuity due is $7,200 given a 10% interest rate.
Answer: FALSE
Diff: 2
Topic: Annuities

45) $500 invested at 8% at the beginning of each of the next four years will grow to approximately $2,433.
Answer: TRUE
Diff: 2
Topic: Future value

46) Given identical data, the future value of annuity due is always greater than the future value of an ordinary annuity.
Answer: TRUE
Diff: 1
Topic: Annuities

47) At any positive rate of interest, a future value will be greater than a present value.
Answer: TRUE
Diff: 1
Topic: Interest compounding

48) With a 10% interest rate, the present value of $100 received one year from today is $90.91.
Answer: TRUE
Diff: 1
Topic: Present value

49) Discounting is the process of reducing future values to present values.
Answer: TRUE
Diff: 1
Topic: Present value

50) The higher the interest (discount) rate, the greater the present value of a future payment.
Answer: FALSE
Diff: 1
Topic: Present value

51) Discounting is the reverse process of compounding.
Answer: TRUE
Diff: 1
Topic: Future value

52) Discounting is the process of reducing future values to present values.
   Answer: TRUE
   Diff: 1
   Topic: Interest compounding

53) The first step in goal planning is setting up a budget.
   Answer: FALSE
   Diff: 1
   Topic: Planning

54) An important part of goal planning is adjusting present values for expected inflation.
   Answer: TRUE
   Diff: 1
   Topic: Planning

55) Making goals concrete begins by determining their costs if they were undertaken today.
   Answer: TRUE
   Diff: 1
   Topic: Planning

56) Most young people prefer a savings schedule with decreasing annual deposits to the savings account.
   Answer: FALSE
   Diff: 1
   Topic: Planning

57) Years with negative balances in the savings schedule implies that loans would be needed to achieve the goals.
   Answer: TRUE
   Diff: 1
   Topic: Planning

58) You can earn 10%. If you hope to accumulate $20,000 in 4 years, you must make annual investments (end of period) of $3,918.
   Answer: FALSE
   Diff: 3
   Topic: Future value

59) In goal planning, you generally match the savings vehicle to the time when the money is needed; for example, short-range goals are funded with low-risk investments.
   Answer: TRUE
   Diff: 1
   Topic: Planning

60) An annual required savings amount confirms our computational accuracy but does not necessarily imply that our savings plan will use that amount *each* year.
   Answer: TRUE
   Diff: 1
   Topic: Planning

61) Ideally, the ending balance in our savings plan is zero.
   Answer: TRUE
   Diff: 1
   Topic: Planning

62) If actual inflation rates exceed the rates assumed in our goal planning, the required annual savings amount can be reduced.
Answer: FALSE
Diff: 1
Topic: Planning

63) Highly volatile inflation rates and earning rates make goal planning a useless activity.
Answer: FALSE
Diff: 1
Topic: Planning

64) Inflation decreases the purchasing power of money.
Answer: TRUE
Diff: 1
Topic: Planning

65) Unplanned for inflation makes it easier to reach our financial goals.
Answer: FALSE
Diff: 1
Topic: Planning

66) Generally, you can invest in higher-return assets for goals that are further out in the future.
Answer: TRUE
Diff: 1
Topic:

Planning