# FINANCIAL MATH & ANALYSIS (12)

# —OPEN EVENT—

# Regional– 2013

***TOTAL POINTS (50 Multiple Choice @ 10 points each)***       _____ *(500)*

# GENERAL INSTRUCTIONS

The number of decimal places used in calculations and in the reporting of your answers is very important.  Below are guidelines to use as you take this test.  If a problem varies from these guidelines, it will be noted in the problem.

## PAYROLL QUESTIONS

> ➢ Do not round the overtime rate.
> ➢ Overtime is paid for any hours over 40 worked in a week, *unless otherwise stated in the problem.*
> ➢ Normal work week is 40 hours, *unless otherwise stated in the problem.*

## PERCENTAGE PROBLEMS

> ➢ Round to the nearest tenth percent when working with percentages.
>> ***Example:*** Use 2.3% NOT 2%
>> ***Example:*** An answer of .9638 should be written as 96.4%

## FRACTIONS

> ➢ All problems with fractions are to be reduced to their lowest terms.

## INTEREST

> ➢ All interest rates are stated in one-year simple interest, *unless otherwise noted.*

## DOLLAR AMOUNTS

> ➢ All dollar amounts must be rounded to the second place (nearest cent).

> ***Example:*** $35.9765 to $35.98

1. Malik Montez works as a lifeguard earning $8.50 an hour for 20 hours a week. What is Montez's straight-time pay for each week?
   A. $170.00
   B. $160.00
   C. $1,600.00
   D. $1,700.00

2. Julie Meyer is the manager for Ace Trucking Company. During December she worked 165 hours earning $27 an hour. What was her straight-time pay for December?
   A. $4,400.00
   B. $4,450.00
   C. $4,500.00
   D. $4,455.00

3. At Green Acres Grocery employees earn an hourly rate of $7.50. They earn double that for any hours they work in addition to their usual 40-hour week. The hours that Paula Strauss worked in one week are shown below. What was Strauss's total pay for the week?

   | Day | Hours |
   |-----------|-------|
   | Monday | 8 ½ |
   | Tuesday | 7 ½ |
   | Wednesday | 8 ½ |
   | Thursday | 9 |
   | Friday | 9 ½ |

   A. $300.00
   B. $45.00
   C. $600.00
   D. $345.00

4. Phyllis Doran worked at Symmes Medical Center for 7 ½ hours on Monday and from 8:00 am until 1:00 pm on Tuesday. What is the total number of hours she worked?
   A. 13 ½ hours
   B. 11 ½ hours
   C. 10 ½ hours
   D. 12 ½ hours

5. At Red Apple Health Foods employees earn time and a half for any hours they work in addition to their usual 35-hour week. Nicole Logan is paid $8.00 per hour. This week she worked 46.25 hours. What is her total pay?
   A. $355.00
   B. $380.00
   C. $415.00
   D. $370.00

6. A portion of Donald Irwin's time sheet is shown below. Determine the number of hours he worked for the week rounded to the nearest quarter hour.

| Date | In | Out | In | Out |
|---|---|---|---|---|
| 12/13 | 7:15 am | 11:15 am | 12:00 pm | 4:30 pm |
| 12/14 | 9:30 am | 12:30 pm | 1:10 pm | 5:10 pm |
| 12/15 | 9:30 am | 12:30 pm | 1:00 pm | 5:00 pm |
| 12/16 | 7:15 am | 12:15 pm | 12:45 pm | 4:45 pm |
| 12/17 | 7:30 am | 11:30 am | 12:00 pm | 3:30 pm |

A. 39 hours
B. 42 hours
C. 37 hours
D. 40 hours

7. Barbara Butler is paid $6.39 for each table she assembles. Last week she assembled the following number of tables. What was Butler's pay for the week?

| Day | Tables |
|---|---|
| Monday | 16 |
| Tuesday | 12 |
| Wednesday | 11 |
| Thursday | 14 |
| Friday | 19 |

A. $460.08
B. $455.09
C. $465.75
D. $475.75

8. Jafar Kim drives a shuttle bus for the airport. He earns $12.75 per trip. What is his total pay for the week shown below?

| Day | Number of Trips |
|---|---|
| Monday | 12 |
| Tuesday | 14 |
| Wednesday | 10 |
| Thursday | 0 |
| Friday | 16 |
| Saturday | 18 |
| Sunday | 0 |

A. $895.00
B. $892.50
C. $879.75
D. $905.25

9. Sasha Story's salary for a four-week period in July was $5,824. What was her weekly salary?
   A. $1,456.00
   B. $1,546.00
   C. $1,756.00
   D. $1,656.00

10. Lucinda Lopez earns a 3 percent commission on all sales. She also receives a $500 bonus if her commission exceeds $2,000. Her total sales were $75,500. What was her total pay?
    A. $2,250.00
    B. $2,750.00
    C. $2,265.00
    D. $2,765.00

11. Quincy Jackson sells motorcycles. He earns a 10 percent commission on the first $5,000 and 15 percent on all sales over $5,000. How much commission will he earn on $19,000 in sales?
    A. $1,900
    B. $2,600
    C. $2,400
    D. $2,850

12. Zahid Faris sells furniture. He earns 4 percent commission on the first $6,000, 7 percent on the next $6,000, and 12 percent on sales over $12,000. Last month he sold $19,500 worth of furniture. What was his total commission?
    A. $1,560
    B. $1,650
    C. $1,760
    D. $1,750

13. Use this table with the question, as needed. Mona Elliott's gross pay is $33,500 a year. The state income tax rate is 3 percent of taxable wages. Elliott takes a single exemption for herself. How much is withheld a year for state income tax?

    | Personal Exemptions |
    | --- |
    | Single - $2,000 |
    | Married - $4,000 |
    | Each Dependent - $2,000 |

    A. $890
    B. $980
    C. $945
    D. $960

14. Hong Wu's gross pay is $61,400. He takes a married exemption of $4,000. His state income tax rate is 3.5 percent. How much will he pay in state tax?
    A. $1,995
    B. $1,722
    C. $2,009
    D. $2,296

15. Cornelius Shultz's annual salary is $29,800. He is paid monthly. His personal exemptions total $4,000. How much does his employer deduct from each of Shultz's paychecks for state income tax of 4 percent?
    A. $76
    B. $86
    C. $96
    D. $106

16. Jack Salomon's gross weekly pay is $498. His earnings to date for the year total $13,446. What amount is deducted from his pay this week for Medicare, which is taxed at 1.45 percent?
    A. $9.00
    B. $8.65
    C. $2.43
    D. $7.22

17. Andrea Butler's gross biweekly pay is $1,078. Her earnings to date for the year total $43,120. What amount is deducted from her pay for Social Security, which is taxed at 6.2 percent (ceiling is $106,800)? For Medicare taxes if the rate is 1.45 percent?
    A. $78.90,    $14.98
    B. $125.00,   $30.05
    C. $66.84,    $15.63
    D. $12.00,    $5.03

18. Lucinda Martinez is employed at Red Balloon Books. She has family medical coverage through the group medical plan that Red Balloon Books provides for its employees. The annual cost of Martinez's family membership is $3,900. The company pays 50 percent of the cost. How much does she pay annually for medical insurance?
    A. $1,950
    B. $2,900
    C. $1,650
    D. $1,000

19. Wayne Wallace is employed at Austria Airlines. He has family medical coverage through the group medical plan that Austria Airlines provides for its employees. The annual cost of Wallace's family membership is $5,500. The company pays 48 percent of the cost. How much is deducted from his weekly paycheck for medical insurance?
    A. $67
    B. $87
    C. $98
    D. $55

20. Randall Fetzer is employed at Rhode Island Community College. He has family medical coverage through the group medical plan that the community college provides for its employees. The annual cost of Fetzer's family membership is $4,900. The college pays 62 percent of the cost. How much is deducted from his biweekly paycheck for medical insurance?
   A. $113.00
   B. $45.98
   C. $67.98
   D. $71.62

21. Sorola Carter's gross weekly pay is $698. His earnings to date for the year total $20,940. What amount is deducted from his pay this week for Social Security, which is taxed at 6.2 percent(ceiling is $106,800)? For Medicare, which is taxed at 1.45 percent?
   A. $47.33,     $31.76
   B. $40.10,     $10.47
   C. $43.28,     $10.12
   D. None of the above.

22. Kar and Ching Chow keep records of their expenditures. They want to know how much they spend each month, on the average. Their records for four months are shown below. What is the average monthly expenditure?

| Month | Expenditure |
|---|---|
| January | $3,356.00 |
| February | $3,988.50 |
| March | $4,010.02 |
| April | $4,765.87 |

   A. $4,001.01
   B. $4,030.10
   C. $3,988.00
   D. $3,765.22

23. The manager of Tony's Pizzeria deposited money in the restaurant's checking account at the end of the day. The deposit included 4 fifty-dollar bills, 9 twenty-dollar bills, 16 ten-dollar bills, 22 five –dollar bills, 16 one dollar bills, 29 quarters, 14 dimes, 9 nickels, and 17 pennies. What was the total deposit?
   A. $675.27
   B. $675.10
   C. $678.27
   D. $698.27

24. Which of the following is the correct word form to write on a check for the amount $27.00?
   A. 27 dollars
   B. Twenty-seven dollars
   C. Twenty seven dollars and no cents
   D. Twenty-seven and 00/100 dollars

25. Terrell DeShay's statement balance is $432.10. He has one outstanding check for $37.00. What is DeShay's adjusted balance?
    A.  $395.10
    B.  $469.10
    C.  $406.10
    D.  $359.00

26. Rosario Fuentes wants to purchase a ladder at Herm's Hardware Store for $87.92. The previous balance in her checking account is $107.65. If she purchases the ladder with a check, what is the new balance?
    A.  $19.73
    B.  $87.92
    C.  $195.57
    D.  $20.73

27. On April 17 Anita Morales had her rugs cleaned by Aero Rug Cleaners. The cost was $135. The previous balance in her checkbook register is $218. If Morales pays Aero Rug Cleaners with a check, what is the new balance?
    A.  $135
    B.  $383
    C.  $83
    D.  $97

28. Miguel Diaz deposited 16 one-dollar bills, 4 twenty-dollar bills, 13 quarters, 18 dimes, and 7 nickels in his checking account. What was his total deposit?
    A.  $115.95
    B.  $114.01
    C.  $101.40
    D.  $101.05

29. Dedra Svensen's bank statement shows a previous balance of $998.22. She makes a deposit of $246.20. She writes a check to Sam's Grocery for $87.21 and a check to The Photo Shop for $76.90. What is her present balance?
    A.  $834.11
    B.  $734.21
    C.  $1,080.31
    D.  $876.21

30. Pamela Ericson wants to deposit a check for $955 and $45 in cash into her savings account. What is her total deposit?
    A.  $100
    B.  $1,000
    C.  $10,000
    D.  $10

31. Fifty-seven and 50/100 dollars as a numeral is:
    A. $56.70
    B. $53.40
    C. $34.50
    D. $57.50

32. Trevor Williams' bank calculates interest on a daily basis. Complete the following interest calculations:

| Principal | * | Rate | * | Time | = | Interest |
|---|---|---|---|---|---|---|
| $2,000 | * | 0.03 | * | 12/365 | = | |

    A. $1.97
    B. $2.75
    C. $1.95
    D. $3.90

33. Marta Perez's savings account has a principal of $1,800. It earns 6 percent interest compounded semiannually. How much is the compound interest after 1 year?
    A. $108.00
    B. $55.62
    C. $54.00
    D. $109.62

34. Linwood Marcus purchased a new couch for $878 and two end tables for $127 each. What is the sales tax on his purchase if he lives in Florida where the sales tax rate is 6 percent?
    A. $57.89
    B. $65.67
    C. $60.30
    D. $67.92

35. Natalia Leon bought a new bicycle for $248. The sales tax rate is 6 percent. What is the total purchase price?
    A. $368.22
    B. $234.66
    C. $262.88
    D. $12.40

36. Jennifer Edwards can subscribe to the Nashville Gazette for $99 for a year, $67 for eight months, $38 for four months, or $10 per month. Which is the better buy?
    A. $38 for four months
    B. $99 for a year
    C. $67 for eight months
    D. $10 per month

37. Shashi Ram wants to buy software to help him with his income tax. The software regularly sells for $54.00. The sale price is $37.99. What is the markdown?
    A. $16.01
    B. $16.99
    C. $15.99
    D. None of the above.

38. Express Books advertised a college dictionary for $27.65 and a dictionary software package for $29.80. The state tax is 5.5 percent and the city tax is 1.5 percent. What is the total purchase price?
    A. $55.67
    B. $61.47
    C. $58.99
    D. $60.60

39. Destiny Paxton has a previous balance at Coffee Emporium of $59.27. She had payments and credits of $29.21. The finance charges 1.75 percent of the unpaid balance and she had $16.16 in new purchases. What is the new balance?
    A. $43.21
    B. $47.11
    C. $46.75
    D. $49.01

40. Larry Thomas's charge account statement shows an unpaid balance of $800. The monthly finance charge is 1.5 percent of the unpaid balance. What is the new account balance?
    A. $871
    B. $812
    C. $819
    D. $809

41. Chin Tam's charge account statement showed a previous balance of $7,112.55, a finance charge of $17.82, new purchases of $86.50 and $111.88, and a payment of $7,080.00. What is his new balance?
    A. $12.13
    B. $0.00
    C. $248.75
    D. $110.01

42. Margery Voss' charge account statement shows an unpaid balance of $4,255.99. The monthly finance charge is 1.75 percent of the unpaid balance. Voss has new purchases of $49.05. What is the new account balance?
    A. $4,330.47
    B. $4,342.01
    C. $4,855.91
    D. $4,379.52

43. Barbara D'Angelo's bank granted her a single-payment loan of $1,000 for 100 days at 12 percent ordinary interest. What is the amount of ordinary interest owed?
    A. $36.77
    B. $32.15
    C. $33.33
    D. $34.55

44. Jay Field's bank granted him a single-payment loan of $6,800. He agreed to repay the loan in 91 days at an exact interest rate of 4.25 percent. What is the maturity value of the loan?
    A. $6,872.05
    B. $6,873.05
    C. $6,098.11
    D. $6,871.11

45. Adolfo Ramirez purchased a microwave and dishwasher for $897. He made an 18 percent down payment and financed the remainder. What amount did he finance?
    A. $791.01
    B. $786.12
    C. $735.54
    D. $766.34

46. Tom Newman took out a simple interest loan of $1,500 at 10 percent interest for 12 months.  How much interest is accrued after 5 months?
    A. $62.50
    B. $75.00
    C. $150.00
    D. $750.00

47. Camryn Mason obtained a loan of $8,000 for a new speedboat at 12 percent for 24 months. The monthly payment is $376.80. What is the interest for the first payment?
    A. $66.90
    B. $80.00
    C. $77.01
    D. $86.22

48. Janet Smith is shopping for a new sport utility vehicle. A portion of the sticker for an SUV is shown below. What is the sticker price?

| SUV | |
|---|---:|
| Base Price | $28,150 |
| Optional Equipment Description | |
|     Anti-Lock Brakes (ABS) | $900 |
|     Automatic Transmission (ATO) | 630 |
|     Deluxe CD/Radio | 1,420 |
| Destination Charge | 699 |

A. $28,150
B. $31,300
C. $31,799
D. $28,849

49. According to research Paul Monroe conducted on the Internet, the base price of a new car is $18,844.00, the options total $2,115.50, and the destination charge is $635.00. He knows that the dealer paid about 97 percent of the base price and 96 percent of the total options. What should Monroe estimate as the dealer's cost for the car?
A. $20,123.54
B. $20,944.56
C. $21,785.00
D. $19,891.63

50. Kevin Mahan purchased a truck for $15,000. He plans to keep this truck for 5 years or 100,000 miles. He plans to sell the truck for $3,000 at the end. He drives the truck for 22,000 miles the first year. Calculate the depreciation for the first year under straight line depreciation?
A. $2,400
B. $2,640
C. $3,300
D. $5,000