

DO NOT WRITE ON TEST



**FINANCIAL MATH &
ANALYSIS CONCEPTS**

~OPEN EVENT~

(190)

REGIONAL 2024

TOTAL POINTS

_____ **100 Points**

Test Time: 60 minutes

GENERAL GUIDELINES:

Failure to adhere to any of the following rules will result in disqualification:

1. Contestant must hand in this test booklet and all printouts if any. Failure to do so will result in disqualification.
2. No equipment, supplies, or materials other than those specified for this event are allowed in the testing area. No previous BPA tests and/or sample tests (handwritten, photocopied, or keyed) are allowed in the testing area.
3. Electronic devices will be monitored according to ACT standards.
4. For any interest calculations, assume a 360-day year.
5. Unless otherwise stated, assume that all plant assets were purchased on January 1.
6. Unless otherwise stated, assume that the overtime rate is 1.5 regular time pay for any hours worked in excess of 40 hours per week.

Multiple Choice Questions

Directions: Identify the letter of the choice that best completes the statement or answers the question.

1. Jenny earns \$1,200 per week. How much does she earn in a year?
 - A. \$14,400
 - B. \$28,800
 - C. \$31,200
 - D. \$62,400
2. Robert Anders earns a commission of 9.5% on sales. Last week he had sales of \$764.90, \$571.85, \$618.67, and \$981.91. Find his commission to the nearest cent.
 - A. \$297.05
 - B. \$279.00
 - C. \$279.05
 - D. \$279.04
3. Christina Cass works at Walmart as a cashier and earns \$12.50 per hour. She works 20 hours every week. How much gross pay does Christina earn each week?
 - A. \$420.00
 - B. \$520.00
 - C. \$240.00
 - D. \$250.00
4. This month Jennifer has a 3-year certificate of deposit (CD) that is getting ready to mature. She invested \$5,000 into the CD and it earns 1.5% simple fixed interest annually. If Jennifer cashes in her CD at maturity, how much will her investment check be worth?
 - A. \$5,015.00
 - B. \$5,225.00
 - C. \$5,228.39
 - D. \$5,075.00
5. Joanne goes to the store to purchase four items valued at \$15.10, \$7.45, \$12.50, and \$22.78. The state sales tax is 6%. What is the total amount she'll have to pay including sales tax?
 - A. \$58.18
 - B. \$57.83
 - C. \$61.30
 - D. \$57.89
6. Diedra McKenzie works an 8-hour day and gets paid overtime for any hours worked over 8. Last week she worked the following hours: Monday, 9 $\frac{1}{2}$; Tuesday, 7 $\frac{3}{4}$, Wednesday, 8; Thursday, 6; Friday, 9. How many regular hours did Diedra work last week?
 - A. 2.50 Hours
 - B. 40.25 Hours
 - C. 37.75 Hours
 - D. 37.0 Hours

7. Melanie earns \$3,750 bi-weekly. How much does she earn in a year?
 - A. \$90,000
 - B. \$195,000
 - C. \$45,000
 - D. \$97,500
8. Eva has been offered a job that pays \$76,850 for working 52 weeks. What average amount does the job pay per month? Round your answer to the nearest cent.
 - A. \$6,404.17
 - B. \$1,477.88
 - C. \$6,404.00
 - D. \$2,955.77
9. Joan earns \$7.85 per hour. If she gets paid time-and-a-half for overtime, what is her overtime rate?
 - A. \$11.78
 - B. \$7.85
 - C. \$15.70
 - D. \$11.75
10. Convert .03 to a percentage.
 - A. 3%
 - B. 30%
 - C. .0003%
 - D. .03%
11. Rosa Mendez works the following schedule in one week: Monday, 8 hours; Tuesday, 6 hours; Wednesday, 7 hours; Thursday, 6 hours; and Friday, 5 hours. She was paid \$13.50 per hour. What was Rosa's gross pay?
 - A. \$342.00
 - B. \$540.00
 - C. \$432.00
 - D. \$472.50
12. Last week Marcus Seymor worked 45.3 hours from Monday through Thursday and 8.1 hours on Friday. If his regular hourly rate is \$17.50, what were his total gross wages for the week?
 - A. \$351.75
 - B. \$934.50
 - C. \$700.00
 - D. \$1,051.75
13. Jan receives a salary of \$90,000 per year and gets paid bi-monthly. How much does she get paid each pay period?
 - A. \$1,730.77
 - B. \$3,750.00
 - C. \$7,500.00
 - D. \$3,461.54

14. The date that a depositor can withdraw money from a certificate of deposit is called the _____ date.
- A. Term
 - B. Maturity
 - C. End
 - D. Prime
15. Certificates of Deposit and Money Market Accounts offer higher interest rates than regular savings accounts.
- A. True
 - B. False
16. Abby buys gasoline once a week and spends on average \$45. How much will she spend on gasoline in a year?
- A. \$2,250
 - B. \$1,170
 - C. \$1,080
 - D. \$2,340
17. Maxine would like to buy a house but isn't sure what she can afford. She read an online statistic stating she shouldn't spend more than 25-30% of her income on housing. If she makes \$6,540 per month, what is the most she could afford for a payment?
- A. \$1,926.00
 - B. \$1,635.00
 - C. \$1,962.00
 - D. \$2,000.00
18. Jojo is paid an hourly rate of \$10.00. Last week he worked 48 hours. What are his total earnings?
- A. \$560.00
 - B. \$520.00
 - C. \$720.00
 - D. \$480.00
19. Martin is shopping for an economical toothpaste and finds the following options: Brighten Your Whites, \$2.78 for a 6-ounce tube; Glow Whites, \$2.36 for a 4-ounce tube; Total Mouth Care, \$3.81 for an 8-ounce tube; and Enamel ProTech, \$3.10 for a 7-ounce tube. Which brand is cheaper per ounce?
- A. Brighten Your Whites
 - B. Glow Whites
 - C. Total Mouth Care
 - D. Enamel ProTech

20. Jordan and his friends want to rent a large screen TV to binge watch the newly released season of their favorite show on Netflix. They can rent it by the day for \$130 or by the week for \$600. They anticipate it will take them 4 days to get through all the episodes. Which rental option will give them the best deal and how much will they save?
 - A. Daily, saving \$80
 - B. Daily, saving \$470
 - C. Weekly, saving \$80
 - D. Weekly, saving \$390

21. If you invest your money at an 8% interest rate, how long will it take you to double your investment?
 - A. 8 years
 - B. 9 years
 - C. 10 years
 - D. 16 years

22. What is 75% of 140?
 - A. 35
 - B. 105
 - C. 85
 - D. 175

23. Mark Yonkers earned \$53,400 this year and according to the tax schedule for his city, he paid \$460 plus 1.25% of his earnings for city taxes. How much city tax did Mark have to pay?
 - A. \$1,127.50
 - B. \$461.25
 - C. \$667.50
 - D. \$460.00

24. Marci Walsh is paid an hourly rate of \$12.00 and works 45.5 hours. What are her overtime earnings?
 - A. \$66
 - B. \$546
 - C. \$99
 - D. \$819

25. Remey Anders's bank account had a balance of \$384.39 at the beginning of June. During the month she made a deposit of \$529.75 and wrote three checks for \$75.29, \$251.78, and \$26.19. She plans to pay another bill at the beginning of July for \$25.38. What was the balance in her account at the end of June?
 - A. \$535.50
 - B. \$914.14
 - C. \$650.88
 - D. \$560.88

26. Danielle is making a deposit that consists of 42-Twenty Dollar Bills, 12-Ten Dollar Bill, 34-Five Dollar Bills, 26-One Dollar Bills, 21-Quarters, 16-Dimes, 4-Nickles, 53-Pennies, and two checks, one in the amount of \$8.25 and the other for \$12.50. What is her total deposit?
 - A. \$1,148.33
 - B. \$1,184.33
 - C. \$1,189.33
 - D. \$1,163.58
27. Scott's earnings for work he did from last week were: \$85, \$71, \$89, \$86, \$68, and \$96. What was his average salary pay for the days he worked?
 - A. \$79.80
 - B. \$82.00
 - C. \$85.20
 - D. \$82.50
28. The Simpsons earn \$8,500 per month. Because of the effect of inflation on grocery prices they increased their grocery budget by \$150 to \$950. What percentage of their monthly income is spent on groceries.
 - A. 2%
 - B. 9%
 - C. 10%
 - D. 11%
29. Jayden Cortez is paid a commission of 9% of his yearly sales up to \$65,000, and 12% on any sales above \$65,000. His total sales last year were \$107,000. What commission did he earn this year?
 - A. \$10,890
 - B. \$5,850
 - C. \$10,980
 - D. \$5,040
30. John is paid \$15 for every bike he assembles correctly. John assembled 30 bikes last week, but 2 were not assembled correctly. How much did John earn last week?
 - A. \$450
 - B. \$360
 - C. \$480
 - D. \$420
31. Brianna spent the following amounts on her electric bill over the last three months: \$157.00, \$181.32, and \$162.84. What was the monthly average she spent on her electric bill?
 - A. \$162.84
 - B. \$160.00
 - C. \$167.05
 - D. \$167.00

32. Convert 23.5% to a decimal.
- A. 2.35
 - B. 2,350.0
 - C. 235.0
 - D. 0.235
33. As of today, Margie has \$256.89 in her bank account. During the week she makes a deposit of \$415.00, two debit card purchases of \$25.73 and \$32.24, and an ATM withdrawal of \$200.00. What is her new balance at the end of the week?
- A. \$471.89
 - B. \$413.92
 - C. \$929.86
 - D. \$213.92
34. Emma is planning to buy a house for \$240,000. If her bank requires that she put 10% down, how much will Emma's down payment be?
- A. \$24,000
 - B. \$20,000
 - C. \$40,000
 - D. \$22,000
35. Archie borrows \$200 for one-year with 5% simple interest. How much will Archie pay back at the end of the year?
- A. \$200
 - B. \$210
 - C. \$300
 - D. \$10
36. Jennifer subbed at the local high school for 12 days last month. Her per diem pay was \$86.75. What were Jennifer's total earnings for the month?
- A. \$1,014
 - B. \$1,410
 - C. \$4,110
 - D. \$1,041
37. Anthony's sales totals last week were \$54.00, \$38.00, \$62.00, \$41.00, and \$39.00. What were Anthony's average sales for the week?
- A. \$46.80
 - B. \$44.00
 - C. \$48.60
 - D. \$41.00
38. The amount of money earned on a promissory note is called the _____.
- A. Principal
 - B. Rate
 - C. Time
 - D. Interest

39. Nancy's job is 32 miles away from her home. If Nancy's car gets 22.5 miles per gallon, how many gallons of gas will she use driving to and from work?
- A. 2.90 gallons
 - B. 2.84 gallons
 - C. 2.00 gallons
 - D. 22.5 gallons
40. Jonathan likes to stop at his local coffee shop on Friday mornings for a latte that costs \$4.59. If Jonathan decides to stop getting a latte every Friday, how much money will he save in a year?
- A. \$238.68
 - B. \$220.32
 - C. \$229.50
 - D. \$242.90
41. Doug Paulson is paid a straight commission of \$10.50 for each item he sells. Last month he sold 210 items. What commission did he earn?
- A. \$2,502
 - B. \$2,205
 - C. \$2,550
 - D. \$2,250
42. Another name for an average is _____.
- A. Mean
 - B. Median
 - C. Mode
 - D. Midrange
43. An invoice dated March 12 has the terms 2/10, n/30. What is the due date for the invoice?
- A. March 14
 - B. March 22
 - C. April 12
 - D. April 11
44. Alexander Johnson's bank gave him a single-payment loan of \$2,500 to make some home repairs. He agreed to repay the loan in 31 days at an annual interest rate of 12.5 percent. What is the maturity value of the loan?
- A. \$2,562.54
 - B. \$2,526.91
 - C. \$2,812.50
 - D. \$2,526.54

45. The total amount of money that an employee earns in one pay period before taxes and other deductions are subtracted is called _____.
A. Net Pay
B. Quota
C. Commission
D. Gross Pay
46. Judy's total income last year was \$65,000. She spent \$4,800 on groceries. What percent of Judy's total income was spent on groceries?
A. 4%
B. 5%
C. 7%
D. 10%
47. Shawna works as an officer manager for a Pilates studio. Her annual salary is \$24,000. How much does Shawna earn as a weekly gross salary?
A. \$461.54
B. \$480.00
C. \$1,000.00
D. \$923.07
48. The monthly health insurance premium provided by Mikayla's employer is \$885, and her employer pays 30% of the cost. What amount does Mikayla pay annually?
A. \$3,186.00
B. \$7,434.00
C. \$265.50
D. \$619.50
49. What is $\frac{45}{70}$ written as a decimal rounded to the nearest hundredth?
A. 0.643
B. 0.6
C. 0.64
D. 0.065
50. Malissa wants to change her television service and is looking at getting cable or satellite service. The cable company serving her area charges \$72.50 per month with free installation. A satellite company charges \$45.99 per month with a \$99.99 set-up fee. For the first year, which option is less expensive and by how much?
A. Cable by \$218.13
B. Cable by \$318.12
C. Satellite by \$218.13
D. Satellite by \$318.12