
BUSINESS CALCULATIONS

Overview

Acquiring a high level of mathematics skill to solve business problems is a challenge for all prospective business employees. This event provides recognition for FBLA members who have an understanding of mathematical functions in business applications.

This is an individual online test.

Competencies and Task Lists

<http://www.fbla-pbl.org/docs/ct/FBLA/BUSINESSCALCULATIONS.pdf>

Website Resources

- How to Calculate Depreciation
<http://www.assetaide.com/depreciation/calculation.html>
- Markup
http://www.321know.com/g84_max1.htm
- Meters and Liters: Converting to the Metric System of Measurements
http://www.learner.org/interactives/dailymath/meters_liters.html
- The Metrics International System of Units
<http://www.wsdot.wa.gov/reference/metrics/factors.htm>

BUSINESS CALCULATIONS SAMPLE QUESTIONS

1. There are several methods of calculating depreciation. One method allows you to claim depreciation over a fixed number of years depending on the class life of the property. What is this method?
 - a. declining balance method
 - b. modified accelerated cost recovery system
 - c. sum of the years digits method
 - d. straight line method

Competency: Depreciation

2. An oven costing \$1,200 will be used for five years and then traded in for an estimated \$750. Using the sum-of-the-years-digits method, find the book value of the oven at the end of the second year.
 - a. \$750
 - b. \$930
 - c. \$1,000
 - d. \$1,030

Competency: Depreciation

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3. The Brown Trucking Company purchased a truck for \$19,000. They use the MACRS method of depreciation. What is the asset's value at the end of year three if the rate of depreciation is 20 percent for Year 1, 32 percent for Year 2, and 19.2 percent for Year 3?
- a. \$5,472.00
 - b. \$13,528.00
 - c. \$2,188.00
 - d. \$6,080.00

Competency: Depreciation

4. All Sports Trophies made this deposit: 6 hundreds; 14 fifties; and checks for \$85, \$23.50, \$45, \$17.50, \$17.27, \$32.35, \$65. They got cash back of 50 one dollar bills, 20 five dollar bills, 10 ten dollar bills, and 8 twenty dollar bills. Find the total deposit.
- a. \$1,585.62
 - b. \$890.00
 - c. \$1,175.62
 - d. \$410.00

Competency: Bank Records

5. What are Chelsea's outstanding deposits if she has a statement balance of \$648.35, outstanding checks of \$44.89 and an adjusted balance of \$794.83?
- a. \$1398.29
 - b. \$101.59
 - c. \$794.83
 - d. \$191.37

Competency: Bank Records

6. Which one of the following services is **not** typically available to customers with online banking?
- a. virus and security software downloads
 - b. pay bills electronically instead of through the mail
 - c. transfer money between accounts
 - d. account access 24 hours a day, 7 days a week

Competency: Bank Records

7. Samuel bought a new car with a purchase price of \$35,340. He is charged a 6.5 percent sales tax on the purchase price. What is the total price with sales tax?
- a. \$37,637.10
 - b. \$2,297.10
 - c. \$33,042.90
 - d. \$40,776.92

Competency: Consumer Credit

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8. The Wards bought a house at its market value of \$82,000. They made a 5 percent down payment and paid these closing costs: legal fees, \$550; property survey, \$310; title insurance, \$275; inspection fees, \$240; and points, \$1,558. What is the total of the closing costs?
- a. \$4,100
 - b. \$7,033
 - c. \$1,558
 - d. \$2,933

Competency: Consumer Credit

9. Sonja borrowed \$1,575 and made 18 payments of \$105.25. How much did she pay in interest?
- a. \$319.50
 - b. \$1,575.00
 - c. \$1,984.50
 - d. \$3,469.50

Competency: Consumer Credit

10. When Josie Shell received her July credit card statement she found these items listed: 7/1, previous balance, \$281.59; 7/7, purchase, \$168.99; 7/10, purchase \$57.98 and 7/25, payment, \$200. Josie's credit card company uses a 1.8 percent monthly periodic rate. Find the finance charge if Josie's card company uses the average daily balance excluding new purchases.
- a. \$5.55
 - b. \$7.45
 - c. \$9.15
 - d. \$4.26

Competency: Consumer Credit

11. Kenny Lee's credit card statement for May showed a previous balance of \$289.16, new purchases of \$107.99, a membership fee of \$35, a finance charge of \$5.96, and a payment of \$100. What is his new balance?
- a. \$326.16
 - b. \$338.11
 - c. \$538.11
 - d. \$389.16

Competency: Consumer Credit

12. Donna works in a marketing department of a printing company. In a meeting with her supervisors, Donna wants to demonstrate that a marketing campaign she designed has resulted in increased sales over the last four months. What type of graphic illustration should Donna use to illustrate her campaign's success?
- a. four color word graph
 - b. line graph
 - c. bar graph
 - d. circle graph

Competency: Data Analysis and Reporting

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13. Which one of the following do you **not** need to know to calculate the breakeven point?
- a. variable costs for manufacturing each unit of the product
 - b. a competitor's price for the same product
 - c. fixed costs for manufacturing each unit of the product
 - d. expected selling price of each unit of the product

Competency: Data Analysis and Reporting

14. What would Chelsea's premium have been for the first year if she had purchased \$250,000 whole life when she was 20?
- a. \$369.50
 - b. \$2,462.50
 - c. \$241.25
 - d. \$2,412.50

Competency: Insurance

15. Rose pays for a general health plan, a dental health plan, and a vision health plan through her employer. The monthly premiums are general health, \$299; dental health, \$265; and vision health, \$59. Her employer's share of these plans is: general health, 35 percent; dental health, 45 percent; and vision health, 75 percent. What is Rose's total monthly premium for all plans and what is her employer's share?
- a. \$623.00; \$73.59
 - b. \$354.85; \$268.15
 - c. \$268.15; \$185.00
 - d. \$623.00; \$354.85

Competency: Insurance

16. Hailey Kaufman borrowed \$1,000 at 6 percent for 85 days. The bank determined the interest she will pay based on a 360 day year. What interest method did the bank use?
- a. rule of 72 method
 - b. exact interest method
 - c. ordinary interest method
 - d. rule of 78 method

Competency: Interest Rates

17. An investor earned \$1,170 interest on funds invested at 9.75 percent annual simple interest for four years. How much was invested?
- a. \$3,500.00
 - b. \$2,870.00
 - c. \$3,000.00
 - d. \$3,250.00

Competency: Interest Rates

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18. Jane borrows \$120,000 at 9.5 percent per annum interest compounding quarterly. She pays regular installments to the bank at the end of each quarter and intends to pay off the loan within four years. What quarterly installment does Jane pay the bank?
- a. \$11,234.68
 - b. \$9,102.70
 - c. \$10,105.62
 - d. \$9,000.00

Competency: Interest Rates

19. From January through June, Superior Advertising took three inventories of merchandise: \$88,000, \$188,200, and \$124,600. The cost of merchandise sold during the six-month period was \$601,200. What was the turnover rate for these six months?
- a. 1.67
 - b. 4.50
 - c. 9.00
 - d. 2.50

Competency: Inventory

20. Amy O'Brien is comparing her retirement benefits at age 62 and 65. If she retires at age 65, her monthly benefit will be \$2,754. If she retires at age 62, her monthly benefit will be reduced by 20 percent. What is her monthly benefit at age 62?
- a. \$3,442.50
 - b. \$550.80
 - c. \$2,303.20
 - d. \$2,203.20

Competency: Investments

21. Find the total investment in 100 shares of stock bought at 24 when the purchase is handled by a full service broker who charges \$17 plus 1.3 percent of the transaction amount?
- a. \$2,548.20
 - b. \$2,431.20
 - c. \$31.20
 - d. \$2,448.20

Competency: Investments

22. A retailer ordered eight dozen jackets for \$14.50 each. The list price of the jacket is \$25.00. What will be the amount of the invoice when it is received?
- a. \$2,400.00
 - b. \$1,392.00
 - c. \$116.00
 - d. \$1,008.00

Competency: Mark-ups and Discounts

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23. Caroline purchased a new car with the purchase price of \$32,230. The manufacturer offers a \$1,500 rebate. Sales tax is 5 percent of the purchase price. What is the purchase price after the rebate and the tax is calculated?
- a. \$33,841.50
 - b. \$32,341.50
 - c. \$1,611.50
 - d. \$30,745.00

Competency: Mark-ups and Discounts

24. A retailer wants to sell 200 electronic toys at its after Christmas sale. The toys cost the store \$15 each. The store's overhead related to the toys is \$5,000. Before Christmas the toys sold for \$55 each. What markup was earned on each toy that sold at the pre-Christmas price?
- a. \$45
 - b. \$50
 - c. \$35
 - d. \$40

Competency: Mark-ups and Discounts

25. A company pays their sales staff a monthly commission of 4 percent on the first \$15,000 of sales, 6 percent on the next \$20,000 of sales, and 7.5 percent on all sales above \$35,000. What amount would Tony Crenshaw earn if his sales for a month were \$41,000?
- a. \$3,075
 - b. \$2,625
 - c. \$2,250
 - d. \$2,550

Competency: Payroll

26. Yvonne works for \$14.35 an hour and gets paid time-and-a-half for overtime hours and double-time for weekend hours. This week Yvonne worked 40 regular hours and 11 overtime hours. Last week Yvonne worked 35 regular hours and 11 weekend hours. Which week did she earn more in wages and by how much?
- a. this week, \$7.17
 - b. this week, \$7.22
 - c. last week, \$7.22
 - d. last week, \$7.17

Competency: Payroll

27. Social Security tax is 6.2 percent per dollar up to \$87,900 of annual earnings. Roy Potter has year to date earnings of \$83,215 and current monthly earnings of \$4,700. What is the amount of Social Security to withhold for the current monthly earnings?
- a. \$0
 - b. \$5,159.33
 - c. \$290.47
 - d. \$291.40

Competency: Payroll

28. A department store has current assets of \$320,750 and current liabilities of \$198,545. What is the store's current ratio, to the nearest tenth?

- a. 2.0
- b. 2.5
- c. 1.0
- d. 1.6

Competency: Ratios and Proportions

29. Bill ships books in 25 lb. boxes. Twelve boxes cost \$180 to ship. Bill wants to cut his shipping costs by 15 percent. How much less would his cost be per box?

- a. \$1.25
- b. \$2.50
- c. \$2.25
- d. \$1.75

Competency: Ratios and Proportions

30. Redmond's property is assessed at \$92,700. The school rate in his district is 1.52 cents per \$1. What is Redmond's school tax?

- a. \$1,409.04
- b. \$6,098.68
- c. \$140,904.00
- d. \$60.98

Competency: Taxes