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/competitive-event/business-calculations/

Website Resources
- 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
- Ratios and Proportions - Ratios - First Glance - Math
  www.math.com/school/subject1/lessons/S1U2L1GL.html

BUSINESS CALCULATIONS SAMPLE QUESTIONS

1) To determine the depreciation value using the declining balance method:
   A) do not subtract the salvage value from the cost
   B) the amount of depreciation each year is the same
   C) the depreciation in the last year must be the salvage value
   D) the salvage value must equal zero

   Competency: Depreciation

2) Which type of transaction **cannot** be completed using online banking?
   A) make a cash deposit
   B) verify account balance
   C) transfer funds from one account to another account
   D) pay a bill

   Competency: Bank Records

3) When reconciling a bank statement, what item(s) must be subtracted from the checkbook register?
A) service charges
B) ATM deposits
C) cleared checks
D) deposits

Competency: Bank Records

4) The lowest monthly payment for a PITI loan is from:
A) an interest only loan
B) a fixed-rate loan
C) a variable-rate loan
D) an adjustable-rate loan

Competency: Consumer Credit

5) The first step in the market research process is to:
A) market to the target market
B) collect data
C) design the research
D) define the problem

Competency: Consumer Credit

6) At a recent car show, Regions Bank was offering car loans for up to five years with APRs of 11.5%. On new cars, a 10% down payment was required. Shawn Paul wanted to finance a $40,000 car for five years. What would be the monthly payment on the loan?
A) $1,050.00
B) $666.67
C) $345.00
D) $1,011.73

Competency: Consumer Credit

7) Christopher Nesmith is trying to determine whether or **not** to buy or lease a car. The car costs $23,000. Lease terms are $542 monthly with a $2,000 down payment and a $10,000 residual value. The loan terms are $904 monthly with a $4,200 down payment. The lease and loan terms are for 24 months. Which is less expensive, leasing or buying, and by how much?
A) buying, $2,896
B) leasing, $2,008
C) leasing, $888
D) buying, $888

Competency: Consumer Credit

8) Using the following numbers, 12, 84, 12, 18, 16, 48, 36, 12, 34, 35, 76, 54, 18, what is the median?
A) 12
B) 34
C) 35
D) 16

Competency: Data Analysis and Reporting

9) The simple average of 2, 4, 4, 7, 8, 9, 9, 10, 11, 12, 20, 24 is what?
A) 11
B) 12
C) 9
D) 10

Competency: Data Analysis and Reporting

10) Typically, units of time are depicted:
A) as vertical bars
B) as horizontal bars
C) along the vertical axis
D) along the horizontal axis

Competency: Data Analysis and Reporting

11) The cost per $1,000 life insurance policy for an 18-year old male is $2.32. For a $50,000 policy, the premium is:
A) $500
B) $232
C) $180
D) $116

Competency: Insurance

12) Amber Harper's employer pays 60 percent of her health insurance premium leaving Amber's portion of her monthly premium to be $180.16. What is the total cost of health insurance premiums for one year?
A) $4,104.24
B) $2,161.92
C) $5,404.80
D) $3,242.88

Competency: Insurance

13) Hayley Henderson goes to her local bank to borrow $12,000 at 6.25 percent interest, for 210 days. If the bank uses the ordinary interest method, how much interest will Hayley have to pay?
A) $431.51
B) $413.24
C) $437.50
D) $393.75

Competency: Interest Rates

14) What is the due date for a 90 day note dated August 13?
A) November 11
B) November 10
C) November 9
D) November 12

Competency: Interest Rates

15) What is the effective interest rate of a simple discount note for $20,000 at a bank discount rate of 15 percent, for a period of 180 days? Round to the tenth of a percent.
A) 16.2 percent
B) 15 percent
C) 16.5 percent
D) 16 percent

Competency: Interest Rates

16)

Beginning Inventory	125	$ 10.00	$ 1,250.00
First Purchase	100	$ 12.00	$ 1,200.00
Second Purchase	250	$ 15.00	$ 3,750.00
Total Available	475		
Ending Inventory	225		

What is the value of total available inventory?
A) $6,200
B) $3,750
C) $2,825
D) $3,263

Competency: Inventory

17) Hometown Bank (HB) has a revenue of $220,250 and expenses of $210,250. HB's total assets equal $171,500 and liabilities equal $100,000. Calculate HB's return on assets.
A) 5.8%
B) 17.2%
C) 34.0%
D) 10.0%

Competency: Investments

18) Brittany O'Neal has the option to earn $152.26 interest on a $5,000 deposit in a savings account paying 3 percent interest daily. The $5,000 also could be deposited in a one-year CD paying simple interest at 5.25 percent annually. Which option provides the best return and by how much?
A) CD by $152.26
B) CD, by $110.24
C) Savings Account by $110.24
D) Savings Account, $152.26

Competency: Investments

19) On March 31, Jessica Lowe borrowed $3,000 from the bank. She gave the bank a four-month note for that amount. The note was dated March 31, and exact interest rate was 9 percent. On the maturity date, what was the amount of the check that Jessica gave the bank?
A) $3,000.00
B) $3,090.00
C) $3,067.50
D) $3,270.00

Competency: Investments

20) A chain discount is:
A) a discount for items made with American manufactured chains
B) a discount for a series of American made manufacturing processes
C) a term used when a vendor offers a buyer more than one discount
D) a discount for related items

Competency: Mark-ups and Discounts

21) What is the cost of a Sony 60" TV that sells at retail for $1,850, with a 65 percent markup based on cost?
A) $1,121.21
B) $1,370.37
C) $2,497.50
D) $3,052.50

Competency: Mark-ups and Discounts

22) What is the retailing equation?
A) selling price = cost + markup
B) cost = selling price X markup
C) cost = selling price/markup
D) selling price = cost – markup

Competency: Mark-ups and Discounts

23) Asia Andrews receives a straight commission rate of 7.2 percent for all sales? What is her gross pay if her sales volume was $82,580 last week?
A) $5,945.76
B) $2,972.88
C) $11,891.52
D) $8,281.23

Competency: Payroll

24) Deductions that employees must have withheld from each paycheck include all of the following, **except:**
A) income tax
B) Medicare
C) social security
D) 401K

Competency: Payroll

25) Maulik Patel had gross earnings of $12,000 for the month of January. Each month, Maulik's employer withholds 19 percent of his earnings for federal and state income tax, 3 percent for health insurance, $40 for United Way contribution, $45 for life insurance premiums, $12.50 for dental insurance, $50 for a U.S. Savings bond. Maulik's employer also withholds FICA tax. The SUTA tax rate is 5.4 percent and the FUTA tax rate is 6.2 percent less the SUTA credit for the first $7,000 earned in a year. What is the total amount of employer payroll and unemployment taxes that Maulik's employer is liable for during January?
A) $2,270.00
B) $2,648.00
C) $1,352.00
D) $1,730.00

Competency: Payroll

26) A company's balance sheet lists total assets at $150,000 and total liabilities as $70,000. What is the company's debt-to-equity ratio?
A) 46.7 percent
B) 87.5 percent
C) 214.3 percent
D) 53.3 percent

Competency: Ratios and Proportions

27) Twenty-five percent of the employees working for ABC Manufacturing Company are still in school. There are forty students working for the company. What is the total number of employees?
A) 100
B) 80
C) 160
D) 120

Competency: Ratios and Proportions

28) Chayla Bryant had federal taxable income of $15,235 last year. How much state income tax is owed if the state income tax rate is 3.5 percent and there are no additions or deductions to calculate state taxable income?
A) $457.05
B) $282.15
C) $533.23
D) $481.25

Competency: Taxes

29) Your only income is listed on the W-2 you received from your employer. Which form can you file your income tax return on?
A) W-4
B) I-9
C) W-2
D) 1040EZ

Competency: Taxes

30) The basic formula to calculate your taxable income is:
A) taxable income = gross income + deductions - exemptions
B) taxable income = gross income – deductions - exemptions
C) taxable income = gross income + deductions + exemptions
D) taxable income = gross income – deductions + exemptions

Competency: Taxes