

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.

Competencies

The topics listed below are prioritized, listing first the most important content areas of the test.

- Marks-ups and discounts
- Investments
- Bank records
- Insurance
- Interest rates
- Payroll
- Ratios and proportions
- Depreciation
- Consumer credit
- Taxes

Procedures/Tips

- Review the Competitive Events Tips in the front of the book.

Web Site Resources

- <http://www.assetaide.com/depreciation/calculation.html>
- http://www.321know.com/g84_max1.htm
- http://www.learner.org/interactives/dailymath/meters_liters.html
- <http://www.wsdot.wa.gov/reference/metrics/factors.htm>
- <http://math.about.com/od/businessmath/tp/businessmath.htm>

Business Calculations Sample Questions

1. Laura took out a short-term loan of \$4,800. She has to repay it in 5 months and will be charged 12% simple interest. What is the amount of interest she will pay?
 - a. \$2,880.00
 - b. \$ 360.00
 - c. \$ 186.67
 - d. \$ 240.00
2. Richard heard about another bank that will pay him 1.5% simple interest on the last day of the month based on his ending balance after charges. How much interest would Richard receive using the ending balance from the question above?
 - a. \$84.37
 - b. \$ 8.41
 - c. \$ 8.46
 - d. \$84.14
3. This year's inflation rate is 2.7%. You placed \$2,000 in a savings account at the beginning of the year earning 2%. How much must you deposit in the account at the end of the year to hold the same purchasing value?
 - a. \$40.00
 - b. \$14.00
 - c. \$54.00
 - d. \$45.00
4. Andy's grandparents gave him a \$100 gift certificate to a sporting goods store. Andy found Nike shocks, but they cost \$120. After the holidays, the shocks went on sale for 25% off. How much money was left after he bought the Nike shocks on sale if tax was 8%?
 - a. \$90.00
 - b. \$22.80
 - c. \$11.50
 - d. \$ 2.80
5. \$521 is 40% of what amount?
 - a. \$ 312.60
 - b. \$1,302.50
 - c. \$ 868.33
 - d. \$ 208.40
6. If I buy a \$20,000 truck for cash, the dealership will give me \$2,000 cash back. If I pay \$4,000 down, I can finance my truck for 4 years and pay \$350/mo. How much more does financing cost me totally?
 - a. \$ 800
 - b. \$2,800
 - c. \$2,000
 - d. \$3,200
7. Lacie earns an annual salary of \$68,300. She is paid bi-weekly. What is her gross bi-weekly pay?
 - a. \$1,313.46
 - b. \$2,626.92
 - c. \$2,845.83
 - d. \$5,691.67

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8. The carpet chosen by Callis International for their reception area was \$16.75 a square yard. What price should the store quote for the carpet if the reception area is 12 ft. 6 in. by 18 ft.?
 - a. \$418.75
 - b. \$481.25
 - c. \$480.75
 - d. \$415.25
 9. Marcy received a statement from the county assessor's office that stated her property was valued at \$76,780. Later she received her tax bill. The percentage used to find the assessed value was 20%, and the tax rate was \$10.9876 per \$100. How much was Marcy's total tax bill?
 - a. \$6,578.92
 - b. \$1,687.26
 - c. \$8,436.27
 - d. \$1,878.26
 10. Katy's factory produced 800 tables at a total cost of \$19,200. If direct materials amounted to \$11,814 and direct labor equaled \$5,226, how much was overhead as a percentage of direct materials?
 - a. 41.32%
 - b. 11.25%
 - c. 18.28%
 - d. 44.24%
 11. 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% of the transaction amount?
 - a. \$2,548.20
 - b. \$2,430.16
 - c. \$2,448.20
 - d. \$2,417.00
 12. KayBees purchased computer games for \$132/doz. Each game retails for \$29.95. To the nearest tenth, what is the rate of markup based on Johnny's cost?
 - a. 272.3%
 - b. 172.3%
 - c. 77.1%
 - d. 8.3%
 13. Find the adjusted gross income for Mike and Carol if they invested \$4,000 in an IRA, had income from their business of \$16,000, and received \$25,000 from a life insurance policy upon death of a relative.
 - a. \$21,000
 - b. \$12,000
 - c. \$37,000
 - d. \$41,000
 14. An item costs \$520 and has a selling price of \$860. Calculate the markup based on cost.
 - a. 65.4%
 - b. 165.3%
 - c. 39.5%
 - d. 60.5%
 15. Anthony had a loan in the amount of \$7,500 at 18% for 2 years. What is the total amount Anthony repaid?
 - a. \$10,200
 - b. \$ 270
 - c. \$ 2,700
 - d. \$ 225

Use for the next 4 questions.

"Best Buy" marked a computer down from \$4,500 to \$3,300.

16. What is the markdown based on the old selling price?
 - a. 36.2%
 - b. 26.7%
 - c. 29%
 - d. 45%
17. What is the markdown based on the new selling price?
 - a. 36.2%
 - b. 27.5%
 - c. 45%
 - d. 29%
18. This computer did not sell at \$3,300. It was marked down an additional 20% from the \$3,300 price. What was its new selling price?
 - a. \$2,640
 - b. \$2,840
 - c. \$2,460
 - d. \$2,860
19. What was the total percent markdown based on its original price?
 - a. 58.6%
 - b. 46.7%
 - c. 50%
 - d. 41.3%

Use for the next 3 questions.

Suzanne is considering a \$250,000 business loan. The first is $8\frac{7}{8}\%$ ordinary interest. The second is $8\frac{7}{8}\%$ exact interest. She expects to repay the loan in 120 days.

20. What is the total interest due if Suzanne selects the ordinary interest arrangement?
 - a. \$7,395.83
 - b. \$7,294.52
 - c. \$7,216.43
 - d. \$7,316.67
21. What is the total interest due if Suzanne selects the exact interest arrangement?
 - a. \$7,294.52
 - b. \$7,395.83
 - c. \$7,316.67
 - d. \$7,216.43
22. Comparing the ordinary interest costs to the exact interest costs, Suzanne will pay how much, more or less?
 - a. \$ 79.16 less
 - b. \$179.40 more
 - c. \$101.31 more
 - d. \$101.31 less

Use for the next 7 questions. Use the chart to calculate your answers.

Regular Price	Sale Price	Markdown	Percent Off
\$52.79		\$12.80	
\$192.74			18.82%
\$544.66	\$444.66		
\$711.12	\$600.00	\$111.12	

23. Calculate the sale price for \$52.79
- \$24.25
 - \$54.25
 - \$37.89
 - \$39.99
24. Calculate the markdown percentage for \$52.79
- 12.80%
 - 75.75%
 - 88.20%
 - 24.25%
25. Calculate the sale price for \$192.74.
- \$165.74
 - \$ 52.50
 - \$156.47
 - \$ 36.27
26. Calculate the amount of the markdown for \$192.74.
- \$36.27
 - \$73.73
 - \$25.00
 - \$18.82
27. Calculate the amount of the markdown for \$544.66.
- \$100.00
 - \$118.36
 - \$100.25
 - \$ 18.36
28. Calculate the markdown percentage for \$544.66.
- 35.00%
 - 23.08%
 - 10.00%
 - 18.36%
29. Calculate the markdown percentage for \$711.12.
- 84.37%
 - 16.36%
 - 83.64%
 - 15.63%
30. David has earned 9.9% simple interest for the last 8 months on \$4,500. What has he earned?
- \$ 44.55
 - \$445.50
 - \$ 29.70
 - \$297.00

Accounting I Answer Key

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|-------|-------|-------|
| 1) D | 11) A | 21) D |
| 2) C | 12) A | 22) A |
| 3) B | 13) B | 23) A |
| 4) A | 14) C | 24) A |
| 5) C | 15) D | 25) C |
| 6) B | 16) C | 26) D |
| 7) C | 17) D | 27) B |
| 8) C | 18) A | 28) C |
| 9) A | 19) B | 29) A |
| 10) D | 20) A | 30) D |

Accounting II Answer Key

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|-------|-------|-------|
| 1) D | 11) B | 21) A |
| 2) C | 12) A | 22) B |
| 3) A | 13) D | 23) A |
| 4) D | 14) D | 24) A |
| 5) C | 15) B | 25) C |
| 6) B | 16) B | 26) C |
| 7) B | 17) C | 27) D |
| 8) B | 18) B | 28) A |
| 9) C | 19) D | 29) A |
| 10) A | 20) A | 30) B |

Banking & Financial Systems Answer Key

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|-------|-------|-------|
| 1) D | 11) C | 21) B |
| 2) A | 12) B | 22) B |
| 3) C | 13) A | 23) A |
| 4) B | 14) C | 24) D |
| 5) B | 15) A | 25) C |
| 6) B | 16) D | 26) C |
| 7) D | 17) B | 27) C |
| 8) C | 18) B | 28) A |
| 9) C | 19) D | 29) D |
| 10) A | 20) A | 30) D |

Business Calculations Answer Key

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|-------|-------|-------|
| 1) D | 11) C | 21) A |
| 2) B | 12) B | 22) D |
| 3) B | 13) B | 23) D |
| 4) D | 14) A | 24) D |
| 5) B | 15) A | 25) C |
| 6) A | 16) B | 26) A |
| 7) B | 17) A | 27) A |
| 8) A | 18) A | 28) D |
| 9) B | 19) D | 29) D |
| 10) C | 20) A | 30) D |

Business Communication Answer Key

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|-------|-------|-------|
| 1) A | 11) B | 21) D |
| 2) C | 12) B | 22) D |
| 3) B | 13) B | 23) B |
| 4) A | 14) B | 24) D |
| 5) A | 15) A | 25) C |
| 6) A | 16) B | 26) D |
| 7) C | 17) D | 27) D |
| 8) C | 18) A | 28) B |
| 9) C | 19) C | 29) B |
| 10) A | 20) D | 30) B |