

**Overview**

The ability to solve common business mathematical problems is a basic skill needed by all prospective business employees. This event provides recognition for FBLA members who have an understanding of basic math functions needed in business.

***This event is only for members in grades 9 and 10.***

**Competencies**

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

- Basic math concepts
- Decimals
- Fractions
- Percentages
- Discounts
- Consumer credit

**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.321know.com/g84_max1.htm)
- [http://www.learner.org/interactives/dailymath/meters\\_liters.html](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/businessmathtp.htm>

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### Business Math Sample Questions

1. Which of the following 4 numbers is the largest:  $\frac{3}{8}$ , .0375,  $\frac{2}{5}$ , or .25?
  - a. .0375
  - b.  $\frac{2}{5}$
  - c. .25
  - d.  $\frac{3}{8}$
2. Mr. Brown can buy a digital camera for the cash price of \$299.99 or pay the installment price of \$25 down and \$21.09 a month for 15 months. How much can he save by paying cash for the camera?
  - a. \$ 8.64
  - b. \$16.36
  - c. \$25.95
  - d. \$41.36
3. The swimming pool in your back yard is 15 yards long, 9 yards wide, and 4.5 feet deep. How many cubic feet of water does your swimming pool hold?
  - a. 607.50 cu. ft.
  - b. 1,822.50 cu. ft.
  - c. 67.50 cu. ft.
  - d. 5,467.50 cu. ft.

Use for the next 3 questions.

Internet traffic on Google is being monitored by their Web master. The total numbers of visitors to the site last week by day are:

Mon. = 37,988

Tues. = 43,905

Wed. = 58,106

Thurs. = 60,561

Fri. = 76,145

4. What is the mean of people surfing the Internet for these days?
  - a. 55,341
  - b. 50,867
  - c. 58,789
  - d. 52,564
5. What is the range of these numbers?
  - a. 37,988
  - b. 76,145
  - c. 58,106
  - d. 38,157
6. What is the median of the people surfing the Internet last week?
  - a. 37,988
  - b. 60,561
  - c. 58,106
  - d. 76,145
7. Gerald bought a 25-foot roll of wire. After using  $\frac{2}{3}$  of the roll of wire, how many feet of wire are left unused?
  - a.  $15\frac{2}{3}$
  - b.  $16\frac{2}{3}$
  - c.  $8\frac{1}{3}$
  - d.  $9\frac{1}{3}$

Use for the next 4 questions.

List Price	Trade Discount Rate	Complement	Net Price
\$180.00	20%		
\$65.45			\$44.51

8. Compute the net price for the list price of \$180.00 using the complement of trade discount using the table above.
  - a. \$ 72.00
  - b. \$108.00
  - c. \$144.00
  - d. \$ 36.00
9. Compute the complement trade discount for the list price of \$65.45 in the table above.
  - a. 32%
  - b. 68%
  - c. 14.7%
  - d. 85.3%
10. Compute the trade discount rate for the list price of \$65.45 using the table above.
  - a. 32%
  - b. 14.7%
  - c. 85.3%
  - d. 68%
11. Find the complement of the trade discount rate for the list price of \$180.00 using the table above.
  - a. 80%
  - b. 20%
  - c. 60%
  - d. 40%
12. Find the product of  $1\frac{1}{4}$  and  $1\frac{1}{3}$ .
  - a.  $1\frac{2}{3}$
  - b.  $2\frac{2}{7}$
  - c.  $\frac{3}{5}$
  - d.  $1\frac{1}{12}$
13. Ellen used  $\frac{3}{4}$  dozen sheets of photo paper to print her pictures. How many twelfths is  $\frac{3}{4}$ ?
  - a.  $\frac{5}{12}$
  - b.  $\frac{11}{12}$
  - c.  $\frac{9}{12}$
  - d.  $\frac{7}{12}$
14. Kathy earns \$2,580 a month. She has chosen to save  $\frac{1}{3}$  of her income this year. How much money will Kathy be saving each month?
  - a. \$ 860.00
  - b. \$ 816.00
  - c. \$1,720.00
  - d. \$ 806.00
15. What is the sum of  $\frac{4}{5}$  and  $\frac{2}{3}$ ?
  - a.  $\frac{3}{4}$
  - b.  $2\frac{3}{15}$
  - c.  $\frac{8}{15}$
  - d.  $1\frac{7}{15}$

16. Find the quotient of  $\frac{3}{5}$  divided by  $\frac{1}{2}$ .

- a.  $3\frac{1}{3}$
- b.  $1\frac{1}{5}$
- c.  $\frac{3}{10}$
- d. 1

17. Find the product of 0.973 and 1.918.

- a. .01866214
- b. 18.66214
- c. .1866214
- d. 1.866214

18. Trent Dillon was comparing prices for frozen turkeys. A 3 lb. turkey was priced at \$4.92, 5 lb. turkey was priced at \$7.95, 7 lb. turkey at \$10.50, and 9 lb. turkey at \$13.77. Which turkey is the best buy?

- a. 9 lb. turkey
- b. 5 lb. turkey
- c. 7 lb. turkey
- d. 3 lb. turkey

19. Find the quotient for .2415 divided by .007.

- a. 345.0
- b. 3.450
- c. .3450
- d. 34.5

20. Find the product of  $\frac{7}{8}$ ,  $2\frac{3}{4}$ , 7.4, and 0.16.

- a. 1.554
- b. 15.54
- c. .2849
- d. 2.849

21. Find the mean for  $5.7 + 6.3 + 4.2 + 5.8 + 3.4$ .

- a. 5.1
- b. 25.4
- c. 6.3
- d. 5.08

22. Find the monthly finance charge for an average daily balance of \$145.59 and annual percentage rate of 24%.

- a. \$ 29.11
- b. \$291.18
- c. \$ 2.91
- d. \$ 34.94

*Use for the next 2 questions: Elaine Jackson purchased 2 sweaters at \$24.99 each, a belt for \$14.49, slacks for \$19.79, shoes for \$54.49, and 5 pairs of socks for \$3.99 a pair.*

23. How much did Elaine spend before sales tax was added?

- a. \$144.21
- b. \$142.74
- c. \$133.71
- d. \$158.70

24. Assuming Elaine's sales tax is 6-3/4%, what was Elaine's total cost?
- \$153.94
  - \$142.74
  - \$152.37
  - \$169.41

Use for the next 3 questions.

New Balance	Previous Balance	Finance Charge	New Purchases	Payments	Credits
	\$332.84	\$4.05	\$62.24	\$50.00	\$46.02
\$426.00		\$6.00	\$120.00	\$100.00	None
\$466.21	\$550.75		\$57.50	\$120.00	\$30.00

25. Compute the new balance using the information in Row 1 of the table above.
- \$302.91
  - \$494.95
  - \$394.95
  - \$294.81
26. Compute the finance charge using the information in Row 3 of the table above.
- \$84.24
  - \$ 7.96
  - \$ 9.62
  - \$32.50
27. Compute the previous balance using the information in Row 2 of the table above.
- \$400.00
  - \$444.00
  - \$412.00
  - \$452.00
28. Find the decimal for 9.1%.
- .0091
  - 91.0
  - .091
  - .910
29. The Denver Ski Shop is selling a pair of ski boots at 22% below its regular price of \$260. How much does the buyer pay for the boots?
- \$254.28
  - \$202.80
  - \$238.00
  - \$ 57.20
30. Jerrica O'Reilly deposited \$800 into a savings account at Nations National Bank. The account earned an annual interest rate of 5 1/2%. What was her interest after three months?
- \$ 13.20
  - \$110.00
  - \$132.00
  - \$ 11.00

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**Business Law Answer Key**

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

**Business Math Answer Key**

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

**Business Procedures Answer Key**

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

**Computer Applications Answer Key**

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

**Computer Problem Solving Answer Key**

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