Graduate Assessment
Study Guide

May 2023

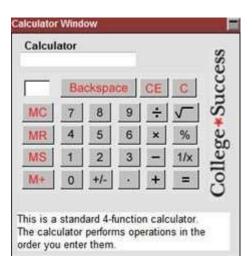**In New York, DeVry University operates as DeVry College of New York**.

Test Taking Tips

- **Prepare**

  Take practice assessments and study areas of weakness. If you need a calculator during practice, use a standard four-function calculator (sample below), which will be available during the assessment.

- **Read the directions carefully**

  When you take the assessments, make sure to take your time and carefully follow the instructions for each question.

- **Use reasoning when answering**
  1. Identify the key phrase in the question.
  2. Try to find the correct answer before you read all the choices.
  3. Eliminate the choices that you know are not correct.
  4. Read all the choices and pick the best answer.

- **Review**

  Be sure to review each answer carefully before submitting. You will not be able to go back to any questions.

Test Subject Areas

There are two Keller subject areas:

Graduate Standard Math
Graduate Writing

The content that is covered tests are listed below by subject.

Standard Math Sample Questions (MATH 500):

Fractions, decimals, and percents

1. Convert 4.445 to an equivalent percent (%).

    A. 444.5%
    B. 44.45%
    C. 4.445%
    D. 0.4445%

2. Convert 0.565% to an equivalent decimal.

    A. 0.000565
    B. 5.65
    C. 0.00565
    D. 0.565

3. Convert 3.45% to an equivalent fraction. Reduce to lowest terms.

    A. $\dfrac{69}{2000}$

    B. $\dfrac{3.45}{100}$

    C. $\dfrac{.0345}{1}$

    D. $\dfrac{69}{100}$

4. Convert the fraction $\dfrac{46}{260}$ to an equivalent percent (%). Round to four decimal places before conversion to percent.

    A. 0.1769%
    B. 0.001769%
    C. 17.69%
    D. .1769%

5. Convert .825 to an equivalent fraction. Reduce to lowest terms.

A. $\dfrac{825}{1000}$

B. $\dfrac{33}{40}$

C. $\dfrac{33}{1000}$

D. $\dfrac{825}{40}$

6. Convert $\dfrac{35}{175}$ to an equivalent decimal. Round answer to two decimal places.

A. 0.20
B. 0.22
C. 2.00
D. 2.20

7. Write $5\dfrac{4}{7}$ as an improper fraction.

A. $\dfrac{27}{4}$

B. $\dfrac{39}{7}$

C. $\dfrac{16}{7}$

D. $\dfrac{27}{5}$

8. Convert $\dfrac{15}{6}$ to a mixed number.

A. $1\dfrac{5}{6}$

B. $2\dfrac{1}{3}$

C. $1\dfrac{1}{6}$

D. $2\dfrac{1}{2}$

Expressions

9. Simplify the expression by using order of operations.

$$6^2 - 24 \div 2^2 \times 3 + 1$$

   A. 10
   B. 19
   C. 38
   D. 76

10. Add or subtract as indicated.

$$\frac{-3}{5} + \frac{1}{4} - \frac{3}{10}$$

   A. $\frac{-13}{20}$
   B. $\frac{7}{19}$
   C. $\frac{13}{20}$
   D. 5

11. Evaluate. -8^2

   A. -16
   B. -64
   C. 64
   D. 16

12. Evaluate $3x^2 - 4x - 9$ for $x = -5$

   A. -86
   B. 86
   C. 64
   D. -64

13. Simplify the expression.

$$6(2x^2 + 4x) + 10(4x^2 + 3x)$$

A. $54x^2 + 52x$
B. $54x + 52$
C. $52x + 54$
D. $52x^2 + 54x$

Word problems

14. Jim purchased 2 pieces of property that had been foreclosed on by a local bank for a total of $330,000. When he sold these properties, on the first piece Jim earned a profit of 12% but on the second piece he lost 8%. His total profit was $18,000. How much did Jim pay for each property?

A. 1st piece: $108,000; 2nd piece: $222,000
B. 1st piece: $132,000; 2nd piece: $198,000
C. 1st piece: $222,000; 2nd piece: $108,000
D. 1st piece: $198,000; 2nd piece: $132,000

15. In June, the Cupcake Delights shop made $4\frac{1}{2}$ as much revenue on doughnuts as muffins. If total sales for the month were $44,000, what dollar amount of each was sold?

A. Doughnuts = $8,000; muffins = $36,000
B. Doughnuts = $33,000; muffins = $11,000
C. Doughnuts = $36,000; muffins = $8,000
D. Doughnuts = $11,000; muffins = $33,000

16. A particular company produces widgets. Each widget sells for $9, and the variable cost of producing each unit is 40% of the selling price. If the monthly fixed costs incurred by the company are $50,000, what is the break-even point? (Round answer to two decimal places.)

A. 8,723.49
B. 9,259.26
C. 3,968.25
D. 5,291.01

17. The Sound Shack borrowed $19,000 at 8.5% simple interest over a 36-month period. What is the total interest and value of the loan at maturity?

   A. Interest $23,485; maturity value $42,485
   B. Interest $58,140; maturity value $77,140
   C. Interest $4,845; maturity value $23,845
   D. Interest $1,615; maturity value $20,615

18. A student desired to invest $1,540 into an investment at 9% compounded semiannually for 6 years. With all else equal, what is the future value of this initial investment after the six-year period?

   A. $2,611.66
   B. $2,371.60
   C. $2,005.48
   D. $2,582.73

19. You have $6,000 to invest for 4 years and you have the choice between two investment alternatives. The first investment alternative pays 8.25% per year, compounded quarterly and the second investment alternative pays 8.3% per year compounded semiannually. Which investment yields the greater return?

   A. 8.25% compounded quarterly
   B. Both investments would yield the same return.
   C. Neither are attractive investments.
   D. 8.3% compounded semiannualy

20. A self-employed individual decides to deposit $1,000 into a Roth IRA at the end of each year for the next 30 years. If you can rely on a 10% annual return (compounded annually), how much will the self-employed individual have in the Roth IRA after 30 years and what is the total earned interest?

   A. $164,494 after 30 years; $30,000 in interest
   B. $164,494 after 30 years; $134,494 in interest
   C. $30,000 after 30 years, $3,000 in interest
   D. $134,494 after 30 years; $164,494 in interest

21. A particular item was discounted by 20%. If the sale price is $55, what was the original   price?

   A. $66.00
   B. $75.00
   C. $68.75
   D. $75.50

Equations

22. Find the x- and y-intercepts for the line given by the equation $7x + 2y = 14$.
    A. (2, 0) and (0, 7)
    B. (-2, 0) and (0, -7)
    C. (7, 0) and (0, 2)
    D. (-7, 0) and (0, -2)

23. Use the following information to determine the equation for profit from selling x items.

    Price = $11.00 per unit; Fixed cost = $30,000; Variable cost = $6.11 per unit

    A. Profit = $30{,}000 - 11.00x$
    B. Profit = $11.00x - 30{,}000$
    C. Profit = $4.89x - 30{,}000$
    D. Profit = $30{,}000 - 4.89x$

24. Solve the equation.

$$0.4x - 0.7 = 0.3x + 7$$

    A. x = 6.3
    B. $x = 77$
    C. $x = 11$
    D. $x = 9$

25. Use the substitution method to solve the following set of system equations:

$$\begin{cases} 5x - 4y = 9 \\ x - 2y = -3 \end{cases}$$

    A. $x = 4; y = 5$
    B. $x = 5; y = 4$
    C. $x = 6; y = 4$
    D. $x = 4; y = 6$

26. Use the addition method to solve the following set of system equation:

$$\begin{cases} 3x + 2y = 48 \\ 9x - 8y = -24 \end{cases}$$

    A. $x = 14; y = 12$
    B. $x = 12; y = 8$
    C. $x = 12; y = 14$
    D. $x = 8; y = 12$

27. Solve the formula for *m*.

$$Z = \frac{(x - m)}{s}$$

A. $m = x - Zs$
B. $m = Zs - x$
C. $m = x + Zs$
D. $m = Zs + x$

28. A hybrid automobile was recently purchased for use as a company car. The hybrid originally cost $27,000 with an estimated useful life of 5 years. The company expects to sell the hybrid for $7,000 at the end of the vehicle's useful life. What is the annual depreciation under the straight-line method?

A. $4,000
B. $5,000
C. $20,000
D. $5,400

Answer Key for Standard Math (MATH 500):

Sequence	Description	Key
1	Fractions, decimals, and percents	A
2	Fractions, decimals, and percents	C
3	Fractions, decimals, and percents	A
4	Fractions, decimals, and percents	C
5	Fractions, decimals, and percents	B
6	Fractions, decimals, and percents	A
7	Fractions, decimals, and percents	B
8	Fractions, decimals, and percents	D
9	Expressions	B
10	Expressions	A
11	Expressions	B
12	Expressions	B
13	Expressions	D
14	Word problems	C
15	Word problems	C
16	Word problems	B
17	Word problems	C
18	Word problems	A
19	Word problems	A
20	Word problems	B
21	Word problems	C
22	Equations	A
23	Equations	C
24	Equations	B
25	Equations	B
26	Equations	D
27	Equations	A
28	Equations	A

Standard Graduate Writing (1 Essay):

All writing prompts are equal in terms of degree of difficulty and measurement of success. The topic selections are as follows:

Writing Test Attempt A (1st attempt):
- Your Special Skill

Writing Test Attempt B (2nd attempt):
- Real Courage

Applicants are informed that they are scored based on how well they:
- Develop a multi-paragraph response to the assigned topic that clearly communicates the purpose of their story to the audience.
- Describe the characters, setting, and conflict using meaningful sensory descriptions and details that enable the reader to visualize the experiences in their narrative.
- Support the idea with meaningful examples, reasons, and information based upon their research or readings.
- Organize their essay in a clear and logical manner, including an introduction, body, and conclusion.
- Use well-structured sentences and language that are appropriate for the audience.
- Edit their work to conform to the conventions of standard American English.