

Sample questions with answers in red.

1. Arithmetic operations with positive and negative numbers:

Ex: $-5 - 6$; $(-5)(-6)$; $-5 + 6$; $5(-6)$; etc.
 -11 ; 30 ; 1 ; -30

2. Order of operations in arithmetic calculations:

Ex $10 - 6 \cdot 3^2$ -44

3. Simplify algebraic expressions:

Ex. $4x - 2 + 7x + 5$; $11x + 3$
 $(9x + 4) - (2x - 8)$; $7x + 12$
 $4x(3x + 2)$; $12x^2 + 8x$
 $(2x + 1)(6x - 3)$; etc. $12x^2 - 3$

4. Use the properties of exponents to simplify:

Ex. 3^4 81
 $8^{2/3}$ 4 ; $25^{1/2}$ 5
 x^{-2} $1/x^2$; 2^{-3} $1/8$;
 $(3x^2)^4$ $81x^8$
 $x^8 \div x^2$; etc. x^6

5. Solve quadratic equations:

Ex: $x^2 - 8x + 12 = 0$; $x = 2, 6$
 $9x^2 = 16$; etc. $x = \pm 4/3$

6. Evaluate "sigma" expressions;

Ex. $\sum_{a=4}^7 (a + 5)$ 42

7. Sketching graphs

Ex. $y = 4x - 3$;
 $2x + 3y = 12$;
 $y = x^2$; etc. (See bottom of page)

8. Solve a system of linear equations;

Ex. $\begin{cases} 2x + y = 21 \\ x - 2y = 3 \end{cases}$ $x = 9$ $y = 3$

9. Given two points on a line, write the equation of the line in $y = mx + b$ form;

Ex. Write the equation of the line that passes through the points (1, 5) and (3, 9) $y = 2x + 3$

Commonly asked questions:

What is the test used for?

The diagnostic math test is used to determine a student's quantitative proficiency. (A GMAT or GRE is not required but is acceptable) If the diagnostic math test score is below a set mark, the applicant will be required to successfully complete the MBA 501 – Foundational Math for MBA class at Malone University or an approved math course elsewhere.

Is the math test required?

Yes, or you can choose to take the class listed above.

How long does it take?

The test itself usually takes 30-60 minutes to complete and there will be approximately 20-25 questions very similar to the sample problems on this page.

What should I bring?

3 pencils, erasers, scrap paper and a calculator that is **not** a graphing or programmable type. A calculator is usually available for your use in the School of Graduate and Professional Studies.

How do I schedule the test?

Call the Graduate and Professional Studies office at 1-800-257-4723 ext. 8224 or 330-471-8224

When can I take the test?

Testing is usually available Monday through Friday from 8:30 a.m – 6:00 p.m.

How much does it cost?

There is no charge for the test.

10. Evaluate factorial notation;

Ex. $5!$ 120
 $8! \div 6!$ etc. 56

11. Work with formulas:

Ex. Find A if $A = Pe^{rt}$ where $P = \$1,000$,
 $r = 4.2\%$, and $t = 3$ years. (Note: $e \approx 2.72$)
 $A = \$1134.28$

