

Practice Math Placement Test Questions

The Elementary Algebra version of the math placement test has approximately 12 questions and tests students in the following areas. Results on this section of the test will place students into one of the following courses: MATH 009, MATH 012, MATH 106/107/115. Placement into a mathematics course beyond MATH 115 is based on completion or transfer of pre-requisites or their equivalent.

- Operations with integers and rational numbers; computations with absolute values; order of operations. These problems cover various minimal skill levels of algebra. Approximately 8% - 17% of the math placement test contains problems in this category.
- Operations with algebraic expressions; minimal skill levels using evaluation of simple formulas and expressions; addition, subtraction, multiplication, and division of monomials and polynomials; evaluation of positive rational roots and exponents; simplifying algebraic fractions and factoring. Approximately 42% - 67% of the math placement test contains problems in this category.
- Solutions of equations, inequalities and word problems; solving of equations by factoring; solving word problems presented in an algebraic context including geometric reasoning and graphing; translation of written phrases into algebraic expressions. This category of problems constitutes approximately 17% - 50% of the math placement test on how proficient students are in the first two categories.

The following problems are merely suggested practice problems for the math placement test. Some of them may or may not be similar to the problems on the actual placement test. It is recommended that if a student has difficulty completing the problems that they review skills developed in a first and second year high school algebra class.

1. Which is greater than -4? (a) 5 (b) -5 (c) $-11/2$ (d) -25

2. Which is the smallest? (a) -1 (b) $-1/2$ (c) 0 (d) 3

3. Combine terms: $12a + 26b - (4b + 16a)$

4. Simplify: $(4 - 5) - (13 - 18 + 2)$

5. What is $|-26|$?

6. Multiply: $(x - 4)(x + 5)$

7. Factor: $5x^2 - 15x - 20$

8. Factor: $3y(x - 3) - 2(x - 3)$

9. Factor: $9x^2 + 15x - 14$

10. Solve for x :

$$2x - y = \frac{3}{4}x + 6$$

11. Subtract and simplify:

$$\left(\frac{2}{x+1}\right) - \left(\frac{3}{x-3}\right)$$

12. Multiply and simplify:

$$\left(\frac{4x^3}{2y}\right)\left(\frac{10y^2}{36x}\right)$$

13. Simplify: $(6x^3y^5)^2$

14. Simplify:

$$\frac{2x}{3} - \frac{3x}{5} + \frac{x}{2}$$

15. Solve for x :

$$\frac{-5x}{7} = -\frac{10}{21}$$

16. Simplify:

$$\frac{24s}{3s}$$

17. Solve for x :

$$\frac{2x}{5} = 12 - \frac{3x}{2}$$

18. In which quadrant is the point $(-3, 4)$?

19. Six less than five times a number is subtracted from three times the number. If the result is 12, find the number.

20. The length of a rectangle is 3 cm longer than twice the width. The area of the rectangle is 90 sq cm. Find the length and the width of the rectangle.

Practice Math Placement Test Answers

1. (a)

2. (a)

3. $-4a + 22b$

4. 2

5. 26

6. $x^2 + x - 20$

7. $5(x + 1)(x - 4)$

8. $(x - 3)(3y - 2)$

9. $(3x - 2)(3x + 7)$

10. $x = (4/5)(y + 6)$

11. $-(x + 9)/(x + 1)(x - 3)$

12. $5x^2y/9$

13. $36x^6y^{10}$

14. $17x/30$

15. $x = 2/3$

16. 8

17. $120/19$

18. quadrant II

19. -3

20. 15 cm by 6 cm