

Tompkins Cortland Community College – Mathematics Placement Program

MATH 132 (College Algebra and Trig) Qualifying Test -

Practice Problems

This practice test has been developed for your use to help prepare you to take the college's placement test for Math 132, College Algebra and Trigonometry, and to give you an idea of the skills necessary to be successful in that course. You are expected to have a solid foundation in intermediate algebra skills. The questions below are similar to, but not identical to the questions on the placement test. If these questions seem too difficult or too easy for you, reconsider taking Math 132 and speak to an advisor about alternatives. Answers (on separate sheet) should be consulted AFTER completion.

1. Simplify $(18x^2 + 4x^3 - 11x - 3) - (5x + 6x^2 - x^3 + 2)$

2. Factor completely: $2x^2 - 7x - 15$

3. Solve for x: $\frac{x+3}{2} - 1 = \frac{x+1}{7}$

4. Simplify and express the answer with positive exponents only:

$$\frac{-18x^5 y z^6}{27x^8 y^4 z^2}$$

5. Multiply and simplify: $(2x - 7)^2$

6. Given: $f(x) = 2x^3 - x^2 + 5x - 1$, determine $f(-1)$

7. Graph the linear equation: $3x - 2y = 12$

8. Solve for x: $3x^2 + 16x + 5 = 0$

9. Solve for x and express the answer in interval notation:

$$2(x + 3) - 1 \geq 1 - (x + 8)$$

10. Determine the equation of a line whose slope is $\frac{2}{7}$ and which goes through the point $(8, -2)$.

11. Solve for x: $|4x - 3| = 6$

12. Solve the system of equations by an algebraic method.

$$2x - 6y = 14$$

$$3x + 2y = 10$$