

What you need to know to be successful in Precalculus

You will need to understand topics like: solving linear equations and inequalities, graphing linear functions, factoring polynomials, solving quadratic equations by factoring and quadratic formula, simplifying rational expressions, solving systems of equations, working with exponents and radicals, and understanding basic function concepts, with a mix of calculation and application problems. Example skills include:

Linear Equations and Inequalities:

Solve for x : $2x - 5 = 11$, Solve for y : $3y + 2 > 14$, and Graph the inequality: $y \leq -2x + 3$.

Polynomials and Factoring:

Factor the polynomial: $x^2 - 9x + 20$

Multiply the polynomials: $(x + 3)(x - 2)$

Find the roots of the equation: $x^2 - 5x + 6 = 0$

Quadratic Equations:

Solve by factoring: $x^2 - 4x = 0$

Solve using the quadratic formula: $2x^2 + 3x - 2 = 0$

Rational Expressions:

Simplify: $\frac{x^2 - 4}{x + 2}$

Add the rational expressions: $\frac{2}{x} + \frac{3}{x - 1}$

Solve for x : $\frac{2}{x - 1} = 5$

Systems of Equations:

Solve by substitution: $x + 2y = 5$, $2x - y = 1$

Solve by elimination: $3x + 2y = 8$, $x - 2y = 2$

Determine if the system has one solution, no solution, or infinitely many solutions:

$x + y = 3$, $2x + 2y = 6$

Exponents and Radicals:

Simplify: $(2x^3)^4$

Simplify: $\sqrt{25x^6}$

Functions:

Find the domain of $f(x) = \frac{1}{x-2}$

Given $f(x) = 2x + 1$, find $f(3)$

Graph the function $y = x^2 - 1$

If you do not feel confident in performing these prerequisite math skills, please consider enrolling in MTH128 Intermediate Algebra instead. HS GPA and placement tests do not always predict the best math placement for your abilities.