

KYOTE College Readiness Placement Exam Standards

- CR 1.** Evaluate numerical expressions involving signed numbers, positive integer exponents, order of operations and parentheses.
- CR 2.** Evaluate algebraic expressions at specified values of their variables using signed numbers, positive integer exponents, order of operations and parentheses.
- CR 3.** Perform arithmetic calculations involving fractions, decimals and percents.
- CR 4.** Order fractions and decimals on a number line.
- CR 5.** Solve applied arithmetic problems using appropriate units, including problems involving percentage increase and decrease, rates and proportions.
- CR 6.** Solve simple geometry problems involving properties of rectangles and triangles.
- CR 7.** Solve simple coordinate geometry problems.
- CR 8.** Add and subtract polynomials.
- CR 9.** Multiply polynomials.
- CR 10.** Simplify algebraic expressions involving positive and negative integer exponents, and square roots.
- CR 11.** Factor a polynomial in one or more variables by factoring out its greatest common factor; factor a quadratic polynomial.
- CR 12.** Add, subtract and multiply simple rational expressions.
- CR 13.** Simplify a rational expression.
- CR 14.** Solve a linear equation.
- CR 15.** Solve a multivariable equation for one of its variables.
- CR 16.** Use a linear equation to solve a simple word problem.
- CR 17.** Solve a linear inequality.
- CR 18.** Find the slope of a line given two points on the line or its equation; find the equation of a line given two points on the line, or a point on the line and the slope of the line.
- CR 19.** Graph a line given its equation; find the equation of a line given its graph.
- CR 20.** Solve a quadratic equation by factoring or by using the quadratic formula.
- CR 21.** Solve a system of two linear equations in two variables.

KYOTE College Algebra Placement Exam Standards

CA 1. Evaluate algebraic expressions at specified values of their variables using signed numbers, rational exponents, order of operations and parentheses.

CA 2. Add, subtract and multiply polynomials.

CA 3. Simplify algebraic expressions involving integer exponents.

CA 4. Simplify algebraic expressions involving square roots and cube roots.

CA 5. Factor a polynomial in one or more variables by factoring out its greatest common factor. Factor a trinomial. Factor the difference of squares.

CA 6. Add, subtract, multiply and divide rational expressions.

CA 7. Simplify a rational expression.

CA 8. Solve a linear equation.

CA 9. Solve a multivariable equation for one of its variables.

CA 10. Solve a linear inequality in one variable.

CA 11. Solve a quadratic equation.

CA 12. Solve an equation involving a radical, a rational or an absolute value expression.

CA 13. Solve a system of two linear equations in two variables.

CA 14. Solve problems that can be modeled using a linear or quadratic equation or expression.

CA 15. Solve geometry problems using the Pythagorean theorem and the properties of similar triangles.

CA 16. Understand and apply the relationship between the properties of a graph of a line and its equation.

CA 17. Find the intercepts and the graph of a parabola given its equation. Find an equation of a parabola given its graph.

CA 18. Evaluate a function at a number in its domain. Find the domain of a rational function or the square root of a linear function.

Textbook Alignment with KYOTE Placement Exam Standards

The table below shows how each exercise found in the text aligns with KYOTE's College Readiness (CR) and College Algebra (CA) Placement Exam Standards.

Chapter Exercises	KYOTE Standards
1.1 Signed Numbers, Exponents, and Order of Operations	CR 1, CR 2; CA 1
1.2 Prime Numbers, GCF, and LCM	Foundational Content
1.3 Fractions	CR 2, CR 3; CA 1
1.4 Decimals and Percentages	CR 3
1.5 Number Line and Absolute Value	CR 4
1.6 Applications Using Units, Rates and Proportions	CR 5
2.1 Properties of Simple Geometric Figures	CR 6
2.2 Coordinate Geometry	CR 7
2.3 Pythagorean Theorem and Similar Triangles	CA 15
3.1 Integer Exponents	CR 10; CA 1, CA 3
3.2 Square Roots	CR 10; CA 1, CA 4
3.3 Roots and Rational Exponents	CA 1, CA 4
4.1 Add and Subtract Polynomials	CR 8; CA 2
4.2 Multiply Polynomials	CR 9; CA 2
4.3 Factor Polynomials	CR 11; CA 5
5.1 Simplify Rational Expressions	CR 13; CA 7
5.2 Multiply and Divide Rational Expressions	CR 12; CA 6
5.3 Add and Subtract Rational Expressions	CR 12; CA 6
6.1 Solve Linear Equations in One Variable	CR 14; CA 8
6.2 Solve Multivariable Linear Equations for One of Their Variables	CR 15; CA 9
6.3 Applications of Linear Equations	CR 16; CA 14
6.4 Solve Linear Inequalities in One Variable	CR 17; CA 10
7.1 Slopes and Graphs of Lines	CR 18; CA 16
7.2 Equations and Graphs of Lines	CR 18, CR 19; CA 16
7.3 Parallel and Perpendicular Lines	CA 16
8.1 Solve Quadratic Equations	CR 20; CA 11
8.2 Completing the Square	CA 11, CA 17
8.3 Graph Quadratic Function	CA 17
8.4 Applications of Quadratic Equations	CA 14
9.1 Solve Systems of Linear Equations by Graphing	CR 21; CA 13
9.2 Solve Systems of Linear Equations Analytically	CR 21; CA 13
10.1 Functions	CA 18
10.2 Solve Rational, Radical and Absolute Value Equations	CA 12