EdReady. Set. Go!

EdReady is a math and English readiness system that employs a knowledge inventory to personalize a learner’s path to subject mastery within the context of a specific educational goal.

**STUDENTS** can self-assess for college readiness, view study options, and follow a personalized study path to fill gaps in knowledge.

**EDUCATORS** can see useful data to guide students to success, improve retention, and lay a solid foundation for college completion.

**INSTITUTIONS** can customize EdReady. Here’s how it works...

### Goals
Each EdReady goal can support a unique, student-focused readiness experience. EdReady can accommodate a variety of goals, depending on your needs.

### Scope
You can tailor study paths and embedded diagnostics to support programmatic needs within a customized scope of expectations.

### Resources
A personalized study path with topic-specific, media-rich learning resources will guide your students toward their goals. You can choose which curated resources your students will see.

### Data Access
You can set permissions for live student data dashboards and downloads for teachers, administrators, and counselors.

### Readiness
As students meet or exceed their target scores, you can direct them toward additional steps they may take on their journey to academic and personal success.

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Watch an animated tour of the student experience at EdReady.org

By joining The NROC Project (NROC), your institution can acquire a customized EdReady site with robust reporting capabilities.

To learn more, contact us at membership@NROC.org.
ARITHMETIC MODULES

Unit 1: Whole Numbers
Introduction to Whole Numbers
☐ Place Value and Names for Whole Numbers
☐ Rounding Whole Numbers
☐ Comparing Whole Numbers
Adding and Subtracting Whole Numbers
☐ Adding Whole Numbers and Applications
☐ Subtracting Whole Numbers and Applications
☐ Estimation
Multiplying and Dividing Whole Numbers
☐ Multiplying Whole Numbers and Applications
☐ Dividing Whole Numbers and Applications
Properties of Whole Numbers
☐ Properties and Laws of Whole Numbers
☐ The Distributive Property
Exponents, Square Roots, and the Order of Operations
☐ Understanding Exponents and Square Roots
☐ Order of Operations

Unit 2: Fractions and Mixed Numbers
Introduction to Fractions and Mixed Numbers
☐ Introduction to Fractions and Mixed Numbers
☐ Proper and Improper Fractions
☐ Factors and Primes
☐ Simplifying Fractions
☐ Comparing Fractions
Multiplying and Dividing Fractions and Mixed Numbers
☐ Multiplying Fractions and Mixed Numbers
☐ Dividing Fractions and Mixed Numbers
Adding and Subtracting Fractions and Mixed Numbers
☐ Adding Fractions and Mixed Numbers
☐ Subtracting Fractions and Mixed Numbers

Unit 3: Decimals
Introduction to Decimals
☐ Decimals and Fractions
☐ Ordering and Rounding Decimals
Decimal Operations
☐ Adding and Subtracting Decimals
☐ Multiplying and Dividing Decimals
☐ Estimation with Decimals

Unit 4: Ratios, Rates, and Proportions
Ratio and Rates
☐ Ratio and Rates
Proportions
☐ Understanding Proportions

Unit 5: Percents
Introduction to Percents
☐ Convert Percents, Decimals, and Fractions
Solving Percent Problems
☐ Solve Percent Problems

Unit 6: Measurement
U.S. Customary Units of Measurement
☐ Length
☐ Weight
☐ Capacity
Metric Units of Measurement
☐ The Metric System
☐ Converting within the Metric System
☐ Using Metric Conversions to Solve Problems
Temperature
☐ Temperature Scales

BEGINNING ALGEBRA MODULES

Unit 9: Real Numbers
Introduction to Real Numbers
☐ Variables and Expressions
☐ Integers
☐ Rational Real Numbers
Operations with Real Numbers
☐ Adding Integers
☐ Adding Real Numbers
☐ Subtracting Real Numbers
☐ Multiplying and Dividing Real Numbers

Properties of Real Numbers
☐ Associative, Commutative, and Distributive Properties
Simplifying Expressions
☐ Order of Operations

Unit 10: Solving Equations and Inequalities
Solving Equations
☐ Solving One-Step Equations Using Properties of Equality
☐ Solving Multi-Step Equations
☐ Special Cases and Applications
☐ Formulas
Solving Inequalities
☐ Solving One-Step Inequalities
☐ Multi-Step Inequalities
Compound Inequalities and Absolute Value
☐ Compound Inequalities
☐ Equations and Inequalities and Absolute Value

Unit 11: Exponents and Polynomials
Integer Exponents
☐ Exponential Notation
☐ Simplify by Using the Product, Quotient, and Power Rules
☐ Products and Quotients Raised to Powers
☐ Scientific Notation
Polynomials with Single Variables
☐ Introduction to Single Variable Polynomials
☐ Adding and Subtracting Polynomials
☐ Multiplying Polynomials
☐ Multiplying Special Cases
☐ Dividing by a Monomial
☐ Dividing by Binomials and Polynomials
Polynomials with Several Variables
☐ Simplifying and Evaluating Polynomials with More than One Term
☐ Operations with Polynomials

Unit 12: Factoring
Introduction to Factoring
☐ Greatest Common Factor
☐ continued...
# NROC Developmental Math – Table of Contents (Page 2 of 2)

## Factoring Polynomials
- Factoring Trinomials
- Factoring: Special Cases
- Special Cases: Cubes

## Solving Quadratic Equations
- Solve Quadratic Equations by Factoring

### Unit 13: Graphing

**Graphs and Applications**
- The Coordinate Plane
- Graphing Linear Equations

**Slope and Writing the Equation of a Line**
- Finding the Slope of a Line
- Writing the Equation of a Line
- Parallel and Perpendicular Lines
- Graphing Linear Inequalities

### Unit 14: Systems of Equations and Inequalities

**Graphing Systems of Equations and Inequalities**
- Graphing Systems of Linear Equations
- Graphing Systems of Inequalities

**Algebraic Methods to Solve Systems of Equations**
- The Substitution Method
- The Elimination Method

**Systems of Equations in Three or More Variables**
- Solving Systems of Three Variables

### Intermediate Algebra Modules

**Unit 15: Rational Expressions**

**Operations with Rational Expressions**
- Introduction to Rational Expressions
- Multiplying and Dividing Rational Expressions
- Adding and Subtracting Rational Expressions
- Complex Rational Expressions

**Rational Equations**
- Solving Rational Equations and Applications

**Formulas and Variation**
- Rational Formulas and Variation

### Unit 16: Radical Expressions and Quadratic Equations

**Introduction to Roots and Rational Exponents:**
- Roots
- Squares, Cubes, and Beyond
- Rational Exponents

**Operations with Radicals**
- Multiplying and Dividing Radical Expressions
- Adding and Subtracting Radicals
- Multiplication of Multiple Term Radicals
- Rationalizing Denominators

**Radical Equations**
- Solving Radical Equations

**Complex Numbers**
- Complex Numbers
- Operations with Complex Numbers

**Solving Quadratic Equations**
- Square Roots and Completing the Square
- The Quadratic Formula

### Unit 17: Functions

**Introduction to Functions**
- Identifying Functions

**Using Functions**
- Evaluating Functions
- Graphing Types of Functions
- Finding Domain and Range

**Operations with Functions**
- Arithmetic Operations with Functions

### Unit 18: Exponential and Logarithmic Functions

**Exponential Functions**
- Introduction to Exponential Functions

**Logarithmic Functions**
- Introduction to Logarithmic Functions
- Properties of Logarithmic Functions

**Natural Logarithms**
- Introduction to Natural and Common Logarithms

**Logarithmic and Exponential Equations**
- Solving Exponential and Logarithmic Equations
- Mathematical Modeling with Exponential and Logarithmic Functions

### Geometry, Statistics, & Trigonometry Topics

**Unit 7: Geometry**

**Basic Geometric Concepts and Figures**
- Figures in 1 and 2 Dimensions
- Properties of Angles
- Triangles
- The Pythagorean Theorem

**Perimeter, Circumference, and Area**
- Quadrilaterals
- Perimeter and Area
- Circles

**Volume of Geometric Solids**
- Solids

**Unit 8: Concepts in Statistics**

**Statistical Graphs and Tables**
- Graphing Data
- Other Types of Graphs

**Measures of Center**
- Measures of Center

**Graphical Representations**
- Use and Misuse of Graphical Representations

**Probability**
- Probability

### Unit 19: Trigonometry

**Introduction to Trigonometric Functions**
- Identifying the Six Trigonometric Functions
- Right Triangle Trigonometry
- Unit Circle Trigonometry

**Graphing Trigonometric Functions**
- Degree and Radian Measure
- Graphing the Sine and Cosine Function
- Amplitude and Period
# NROC Algebra 1 – Table of Contents

## Semester 1

### Unit 1: Algebra: A New Angle

**Lesson 1: Algebra: What's It All About?**
- Algebra—Everyday and Extraordinary
- Algebra—Why and When
- Algebra—Approaching Problems

### Unit 2: Solve Linear Equations

**Lesson 2: Writing and Solving Equations**
- Solving Equations
- Solving Multi-Step Equations
- Writing Expressions and Equations
- Solving for a Specific Variable

**Lesson 3: Absolute Value Equations**
- Absolute Value
- Solving Absolute Value Equations

### Unit 3: Functions and Patterns

**Lesson 4: Working with Patterns**
- Inductive Patterns
- Representing Patterns

### Unit 4: Analyze and Graph Linear Equations, Functions, and Relations

**Lesson 5: Graphing Functions and Relations**
- Representing Functions and Relations
- Domain and Range
- Proportional Functions
- Linear Functions
- Non-Linear Functions

**Lesson 6: Graphing Linear Equations**
- Rate of Change and Slope
- Intercepts of Linear Equations
- Graphing Equations in Slope Intercept Form
- Point Slope Form and Standard Form of Linear Equations

**Lesson 7: Parallel and Perpendicular Lines**
- Parallel Lines
- Perpendicular Lines

### Unit 5: Analyze, Solve, and Graph Linear Inequalities

**Lesson 8: Writing, Solving, and Graphing Inequalities in One Variable**
- Writing, Solving, and Graphing Inequalities in One Variable
- Solving and Graphing Absolute Value Inequalities
- Writing and Using Inequalities

**Lesson 9: Solving and Graphing Linear Inequalities in Two Variables**
- Solving and Graphing Linear Inequalities in Two Variables

### Unit 6: Systems of Linear Equations and Inequalities

**Lesson 10: Solving Systems of Linear Equations**
- Solving Systems by Graphing
- Solving Systems by Substitution
- Solving Systems by Elimination

**Lesson 11: Applying Systems of Equations**
- Rate Problems
- Mixture Problems

**Lesson 12: Graphing Systems of Inequalities**
- Graphing Systems of Inequalities

## Semester 2

### Unit 7: Radical Expressions

**Lesson 13: Exponents**
- Rules of Exponents
- Scientific Notation
- Simplifying Expressions with Exponents

**Lesson 14: The Pythagorean Theorem**
- Applications of the Pythagorean Theorem

**Lesson 15: Radical Expressions and Equations**
- Simplifying Radical Expressions
- Solving Radical Equations
- Applying Radical Equations
- Fractional Exponents

### Unit 8: Polynomials

**Lesson 16: Operations on Monomials**
- Multiplying and Dividing Monomials

**Lesson 17: Operations on Polynomials**
- Polynomials
- Adding and Subtracting Polynomials

### Unit 9: Factoring

**Lesson 18: Factoring Monomials and Polynomials**
- Factoring and the Distributive Property
- Factoring Trinomials by Grouping 1
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**Lesson 19: Factoring Special Products of Polynomials**
- Factoring Special Products
- Solving Quadratic Equations by Factoring

### Unit 10: Quadratic Functions

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- Graphing Quadratic Functions
- Solving Quadratic Equations by Completing the Square
- Solving Quadratic Equations Using the Quadratic Formula

**Lesson 21: Applying Quadratic Functions**
- Applications of Quadratic Functions
- Systems of Non-Linear Equations

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**Lesson 22: Rational Expressions**
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- Adding and Subtracting Rational Expressions

**Lesson 23: Rational Equations**
- Solving Rational Equations
- Applying Rational Equations

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**Lesson 24: Logical Reasoning and Number Sets**
- Number Sets
- Understanding Logic Statements
- Inductive Reasoning
- Deductive Reasoning

**Lesson 25: Probability**
- Events and Outcomes (Counting)
- Permutations and Combinations
- Probability of Independent Events
- Probability of Compound Events
# EDREADY ENGLISH TABLE OF CONTENTS

## Unit 1: Introduction to College Reading and Writing

**READING:**
- Author, Audience, and Purpose
- Fact and Opinion
- Using Context Clues
- Identifying Word Parts
- Topic Sentences

**WRITING**
- Topic Sentences
- Revising, Editing, and Proofreading

**GRAMMAR**
- Subjects and Verbs
- Prepositional Phrases
- End Punctuation

## Unit 2: Identifying Main Ideas

**READING**
- Stated Main Ideas
- Supporting Details
- Using Context Clues
- Identifying Word Parts

**WRITING**
- Developing a Thesis Statement and Supporting Ideas

**GRAMMAR**
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- Comma Splices
- Sentence Fragments

## Unit 3: Discovering Implied Meaning

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- Author’s Point of View and Cultural Context
- Implied Main Ideas
- Major and Minor Supporting Details
- Using Context Clues
- Identifying Word Parts

**WRITING**
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- Coherence

**GRAMMAR**
- Subject-Verb Agreement
- Past, Present, and Future Tense

## Unit 4: Interpreting Bias

**READING**
- Making Inferences and Drawing Conclusions
- Outlining a Reading
- Faulty Parallel Structure
- Using Context Clues
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**WRITING**
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**GRAMMAR**
- Commas with Introductory Phrases
- Commas with Transitions
- Adjectives and Adverbs

## Unit 5: Analysis through Definition

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- Identifying Denotation and Connotation
- Identifying Types of Definitions
- Recognizing Objective and Subjective Language
- Using Context Clues
- Identifying Word Parts

**WRITING**
- Creating an Effective Introductory Paragraph for an Essay
- Understanding the Four Sentence Types

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- Comma Use in a Series
- First-, Second-, and Third-Person Pronouns

## Unit 6: Learning Across Disciplines

**READING**
- Understanding Reading and Writing Differences Across Disciplines
- Using Context Clues
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**GRAMMAR**
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- Commas with Relative Pronouns

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- Figurative Language
- Using Context Clues
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**GRAMMAR**
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- Parenthetical Expressions
- Mistakes with Modifiers
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- Listing Causes and Effects in a Reading
- Logical Fallacies and Causal Relationships
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- Semicolons, Colons, and Commas

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- Recognizing the Main Idea and Source Bias in a Complex Reading
- Evaluating Credible Sources Used Within a Reading
- Logical Fallacies and Analysis
- Using Context Clues
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- Using Effective Evidentiary Support
- Paraphrasing vs. Direct Quotations
- Blending Source Material into an Essay

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- Creating Concise Sentences
- MLA Citation Styles

## Unit 10: Using Sources in Critical Reading and Writing

**READING**
- Restating Different Viewpoints
- Using Context Clues
- Identifying Word Parts

**WRITING**
- Finding and Evaluating Sources
- Evidentiary Support
- Avoiding Plagiarism
- Formatting a College Essay – APA Style

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- Capitalizing Words and Punctuating Titles
- Quotation Marks
- APA Citation Styles