

## Topics Assumed for College Algebra (Math 115)

- The real numbers and arithmetic operations on them.
- Real, rational, and irrational numbers: defined and recognized.
- Converting a rational number to decimal form and vice versa (without a calculator).
- Converting a repeating decimal number to rational form.
- Adding and subtracting two rational numbers.
- Order of operations.
- Solving simple linear equations in one variable.
- Set-builder notation.
- Inequalities: set-builder and interval notation.
- Substitution in an equation and evaluating formulas.
- Absolute value: definition and evaluation in simple cases.
- Geometry. Formulas associated with geometric figures. Simple rules of plane geometry.
- Algebraic representation of a picture or word problem.
- Operations with polynomials.
- The negation of a product or of a quotient.
- Simplifying algebraic expressions including rational expressions.
- Proper cancellation in fractions.
- Rules of integer exponents.
- Simplification of expressions involving square roots.