

St Sebastian School
Algebra Student Standards Mathematics
Algebra Exit Expectations Checklist
Grade 8

Expected on Entry

- Obtain quotient and remainder given a two-digit divisor and a three digit divisor
- Estimate the quotient for a division problem
- Check division through multiplication
- Perform basic arithmetic operations with, and reduce to lowest terms, fractions involving single digit whole numbers for numerator and denominator
- Perform basic arithmetic operations with mixed numbers
- Perform basic arithmetic operations with decimal numbers, properly aligning the decimal point
- Arrange fractions, decimals and integers in order of size
- Convert between fractions, decimals, and percents

Reviewed

- Perform basic arithmetic operations with integers, using grouping symbols
- Find area and perimeter of basic plane figures
- Find circumference and area of circles

Mastered

- Problem Solving
- Convert between decimal and scientific notation
- Find product of binomials
- Collect like terms, perform simple monomial factoring
- Use order of operations to simplify polynomials at specific values of the variable
- Evaluate numerical expressions with absolute value
- Solve linear equations with simple fractions and literal numbers
- Simplify exponential expressions with negative bases
- Find special products of squares of binomials
- Factor perfect squares, difference of two squares
- Evaluate numerical expressions containing integral exponents
- Find sum, difference, product, quotient of polynomials
- Simplify algebraic expressions with positive, negative, zero exponents
- Simplify (reduce) rational expressions
- Add, subtract, multiply, divide rational expressions
- Factor a quadratic trinomial in one or two variables completely
- Recognize the relationship between coefficients of perfect square trinomials
- Simplify radical expressions
- Rationalize a rational expression using radicals
- Add, subtract, multiply, divide radical expressions
- Graph a straight line with its equation
- Find the slope and y-intercept of a line with its equation
- Find the equation of a line with two points
- Find the equation of a line with its slope and one point
- Graph a parabola with its equation
- Solve equations with absolute value
- Graph points, linear equations and inequalities, absolute value and quadratic equations
- Recognize the graph of $y = [x]$
- Solve absolute value inequalities
- Graph solution of inequalities on a number line
- Solve quadratic equations
- Solve fractional equations disregarding extraneous roots
- Solve a system of two linear equations in two unknowns