OLEAN HIGH SCHOOL

Course Name: Integrated Algebra (2-years)
Text : Glencoe Mathematics, Algebra
Other Resources: New York State Regents Examination Coach, Integrated Algebra
Glencoe Teacher Resources
Grades 9-12

Int. Alg. 1

Month	Topic Content	Skills / Concepts	Major Assessments	Learning Standards	Resource/Text Page
Sept. –	Expressions and Equations Rational Numbers	Write and evaluate algebraic expressions Solve open sentences Algebraic properties Classify and graph rational numbers	5-minute checks provided by Glencoe tests/quizzes	A.A.1, 2, 3, 21, 22, 24 A.N.1, 2, 5 A.G. 3, 4 A.S. 4, 10, 20	Glencoe Algebra Chapter 1 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, 1-8, 1-9 Chapter 2 2-1
Oct.	Rational Numbers	Add, subtract, multiply, and divide rational numbers Statistics: Displaying and Analyzing Data Probability: Simple Probability and Simple Odds Square Roots and Real Numbers	5-minute checks provided by Glencoe tests/quizzes	A.N.2, 5, 6 A.S.4, 19, 20, 22	Chapter 2 2-2, 2-3, 2-4, 2-5, 2-6, 2-7
Nov.	Solving Linear Equations	Writing Equations > Translate verbal sentences into equations > Translate equations into verbal sentences Solving one-step equations using addition and subtraction Solving one-step equations using multiplication and division Solving multi-step equations	5-minute checks provided by Glencoe tests/quizzes	A.A.3, 4, 5, 6, 22, 26	Chapter 3 3-1, 3-2, 3-3, 3-4

Revised 3-24-2009

Month	Topic Content	Skills / Concepts	Major Assessments	Learning Standards	Resource/Text Page
Dec.	Solving Linear Equations	Solving equations with the variable on each side Working with ratios and proportions Finding and using percent of change Solving equations and formulas for a given variable Using formulas to solve real-world problems	5-minute checks provided by Glencoe tests/quizzes	A.A.6, 22, 23, 26 A.N.5, A.M.1	Chapter 3 3-5, 3-6, 3-7, 3-8, 3-9
Jan	Graphing Relations and Functions	Graph ordered pairs, relations, and equations Transformations on a coordinate plane Determining if a relation is a function	5-minute checks provided by Glencoe tests/quizzes	A.R.1 A.G.3, 4 A.A.5, 39 A.PS.3	Chapter 4 4-1, 4-2, 4-3, 4-4, 4-5, 4-6, 4-7, 4-8
Feb.	Find the Slope of a Line Analyzing linear Equations	Use the both the definition of slope and the slope formula to find the slope's value Writing linear equations in: > slope-intercept form > point-slope form Changing linear equations from point-slope form to slope-intercept form Parallel and Perpendicular lines and their slope relationships Making scatter plots and drawing lines of best fit (manually and using the graphing calculator)	5-minute checks provided by Glencoe tests/quizzes	A.A.32, 33, 34, 35, 36, 37, 38 A.N.5 A.S.7, 8, 12, 17	Chapter 5 5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7

Month	Topic Content	Skills / Concepts	Major Assessments	Learning Standards	Resource/Text Page (chapter – section)
Mar.	Solving linear inequalities	Solving Inequalities with addition, subtraction, multiplication and division Solving multi-step inequalities	5-minute checks provided by Glencoe tests/quizzes	A.A.6, 24, 29 A.G.6	Chapter 6 6-1, 6-2, 6-3
Apr.		Solving compound inequalities Solving inequalities involving absolute value Graphing inequalities in two variables	5-minute checks provided by Glencoe tests/quizzes	A.A.6, 22, 24, 31 A.G.6	Chapter 6 6-4, 6-5, 6-6
May	Solving Systems Inequalities	Graphing systems of equations Solving systems of equations using substitution Solving systems of equations by elimination using addition and subtraction Solving systems of equations by elimination using multiplication and division Graphing systems of inequalities	5-minute checks provided by Glencoe tests/quizzes	A.A.7, 10, 40 A.G.7	Chapter 7 7-1, 7-2, 7-3, 7-4, 7-5
June	Polynomials Review for Local Final Exam Local Final Exam	Multiplying monomials Dividing monomials Scientific notation Polynomials: finding the degree, arranging order of terms in ascending or descending order Adding and subtracting polynomials Multiplying a polynomial by a monomial Multiplying polynomials	5-minute checks provided by Glencoe tests/quizzes	A.A.12, 13 A.N.4 A.R.1	Chapter 8 8-1, 8-2, 8-3, 8-5, 8-6, 8-7, 8-8
End of Year 1					

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Int. Alg. 2

Start of Year 2					
Month	**Topic Content**	**Skills / Concepts**	**Major Assessments**	**Learning Standards**	**Resource/Text Page (chapter – section)**
Sept.	Polynomials	Multiplying monomials Dividing monomials Scientific notation Polynomials: finding the degree, arranging order of terms in ascending or descending order Adding and subtracting polynomials Multiplying a polynomial by a monomial Multiplying polynomials	5-minute checks provided by Glencoe tests/quizzes	A.A.12, 13 A.N. 4 A.R.1	Chapter 8 8-1, 8-2, 8-3, 8-5, 8-6, 8-7, 8-8
Oct.	Factoring	Finding factors and the greatest common factor Factoring using the <u>distributive property</u> Factoring trinomials $(x^2 + bx + c)$ $(ax^2 + bx + c)$ Factoring the differences of two squares $(a^2 – b^2)$ Perfect squares and factoring	5-minute checks provided by Glencoe tests/quizzes	A.A.19, 20, 27	Chapter 9 9-1, 9-2, 9-3, 9-4, 9-5, 9-6
Nov. –	Quadratic Functions	Graphing quadratic functions Solving quadratic equations --Graphically --completing the square	5-minute checks provided by Glencoe tests/quizzes	A.A.28, 41 A.G. 4, 8	Chapter 10 10-1, 10-2, 10-3
Dec.	Exponential Functions	Solving Exponential Functions --Growth and Decay --Geometric Sequences	5-minute checks provided by Glencoe tests/quizzes	A.A.11 A.G.4, 9 A.PS.3	Chapter 10 10-5, 10-6, 10-7

Revised 3-24-2009

Month	Topic Content	Skills / Concepts	Major Assessments	Learning Standards	Resource/Text Page
Jan.	Radical Expressions and Triangles	Radical expressions Operations involving radical expressions Distance Formula Similar Triangles Pythagorean Theorem Trigonometric Ratios	5-minute checks provided by Glencoe tests/quizzes	A.A.23, 42, 43, 44, 45 A.N. 2, 3, 5	Chapter 11 11-1, 11-2, 11-3, 11-4, 11-5, 11-6, 11-7
Feb.	Radical Expressions and Equations	Understanding inverse variation Rational expressions: Identifying values excluded Simplifying ration expressions Multiplying rational expressions	5-minute checks provided by Glencoe tests/quizzes	A.A.15, 16, 18 A.N.5	Chapter 12 12-1, 12-2, 12-3
Mar	Rational Expressions and Equations	Using dimensional analysis with multiplication and division of rational expressions. Dividing polynomials by a monomial or binomial Adding and subtracting rational expressions with like denominators Working with mixed expressions and complex fractions Solving rational equations	5-minute checks provided by Glencoe tests/quizzes	A.A.14, 16, 17, 18, 25, 26	Chapter 12 12-4, 12-5, 12-6, 12-7, 12-8, 12-9
Apr.	Statistics	Sampling and Bias Matrices Histograms Measures of variation Stem & Leaf Plots Box and Whiskers	5-minute checks provided by Glencoe tests/quizzes	A.S.2, 3, 5, 6, 7, 8, 9, 11, 15	Chapter 13 13-1, 13-3, 13-4, 13-5

May	Probability	Counting Principle Permutations and Combinations Compound Events Simulations	5-minute checks provided by Glencoe tests/quizzes	A.A. 30 A.N. 7, 8 A.S. 18. 19, 20, 21, 23	Chapter 14 14-1, 14-2, 14-3, 14-5
June	Review for Integrated Algebra Regents Take Integrated Algebra Regents	Use the Integrated Algebra review book and several old Regents Exams to review the major concepts learned .	Daily quizzes or worksheets to reinforce concepts	All the Integrated Algebra learning standards	**New York State Regents Examination Coach, Integrated Algebra** Chapters 1-5