

CORE COURSE PERFORMANCE OBJECTIVES:

The student will be able to:

1. Perform basic operations on real numbers.(CCC 7)
2. Perform operations with algebraic expressions including applications.(CCC2,7)
3. Perform basic operations with exponents and scientific notation.(CCC 7)
4. Perform basic operations and factoring of polynomials.(CCC 7)
5. Graph functions.(CCC 7)
6. Solve equations and inequalities including applications.(CCC 2,7)
7. Solve systems of simultaneous equations including applications.(CCC 2,7)
8. Perform operations on radicals and radical expressions.(CCC 7)
9. Perform basic operations on algebraic functions. (CCC7)

MEASURABLE PERFORMANCE OBJECTIVES

The Elementary Algebra student will be tested on the following measurable performance objectives:

- 1. Perform basic operations on real numbers. (CCC 7)**
 - 1.1 Write numbers in exponent form; evaluate numerical expressions that contain exponents.
 - 1.2 Recognize polynomials; use the distributive property to multiply a polynomial by a monomial.
 - 1.3 Identify like terms, combine like terms.
 - 1.4 Use the order of operations to simplify numerical expressions involving addition, subtraction, multiplication, division and exponents.
 - 1.5 Evaluate a variable expression for a specified value; evaluate a formula by substitution.
 - 1.6 Simplify variable expressions with several grouping symbols.
 - 1.7 Evaluate a square root of a perfect square and approximate a square root to the nearest thousandth.
 - 1.8 Simplify radical expressions.
 - 1.9 Add or subtract radical expressions.
 - 1.10 Multiply radical expressions.
- 2. Perform operations with algebraic expressions. (CCC 2, 7)**
 - 2.1 Solve equations of the form $x + b = c$ using the addition principle.
 - 2.2 Solve equations of the form $\frac{x}{a} = b$ and $ax = b$.
 - 2.3 Solve equations of the form $ax + b = c$ and equations with parentheses.
 - 2.4 Solve equations with fractions.
 - 2.5 Solve formulas for a specified variable.
 - 2.6 Interpret an inequality statement and graph an inequality on a number line.
 - 2.7 Solve an inequality.
 - 2.8 Write an algebraic expression for two or more quantities that are being compared.
 - 2.9 Use equations to solve word problems.
 - 2.10 Solve word problems involving comparisons.
 - 2.11 Solve applied problems with periodic rate changes, percent problems, investment problems involving simple interest, and coin problems.
 - 2.12 Solve word problems using geometric formulas.
 - 2.13 Use inequalities to solve word problems.
- 3. Perform basic operations with exponents and scientific notation. (CCC 7)**
 - 3.1 Multiply and divide exponential expressions with like bases and raise exponential expressions to a power.
 - 3.2 Use negative exponents and write numbers in scientific notation.

4. **Perform basic operations and factoring of polynomials. (CCC 7)**
 - 4.1 Add and subtract polynomials.
 - 4.2 Multiply polynomials.
 - 4.3 Multiply binomials of the type $(a + b)(a - b)$, $(a + b)^2$ and $(a - b)^2$; multiply polynomials with more than two terms.
 - 4.4 Divide a polynomial by a monomial and by a binomial.
 - 4.5 Factor polynomials containing a common factor in each term.
 - 4.6 Factor problems with four terms by grouping.
 - 4.7 Factor polynomials of the form $x^2 + bx + c$.
 - 4.8 Factor a trinomial of the form $ax^2 + bx + c$ by the trial and error method and by the grouping method.
 - 4.9 Recognize and factor problems of the type $a^2 - b^2$ and the type $a^2 + 2ab + b^2$.
 - 4.10 Identify and factor any polynomial that can be factored.
 - 4.11 Solve a quadratic equation by factoring.

5. **Graph functions. (CCC 7)**
 - 5.1 Plot a point given the coordinates, name the coordinates of a plotted point, and find ordered pairs for a given linear or quadratic equation.
 - 5.2 Graph a straight line by plotting points, by finding its x- and y-intercepts, and graph horizontal and vertical lines.

6. **Solve systems of simultaneous equations including applications. (CCC 2,7)**
 - 6.1 Solve a system of linear equations by graphing.
 - 6.2 Solve systems of linear equations by substitution.
 - 6.3 Solve systems of linear equations by addition/elimination.

7. **Perform operations on rational expressions. (CCC 7)**
 - 7.1 Simplify an algebraic fraction by factoring.
 - 7.2 Multiply and divide algebraic fractions and write the answer in simplest form.
 - 7.3 Add and subtract algebraic fractions with the same denominator and with different denominators.
 - 7.4 Simplify complex fractions.

8. **Perform basic operations on algebraic functions. (CCC 7)**
 - 8.1 Solve equations involving algebraic fractions.
 - 8.2 Solve problems involving ratio and proportion, similar triangles, distance problems and work problems.

EVALUATION CRITERIA

Self-Paced students will demonstrate proficiency on all Measurable Performance Objectives at least to the 75% level. The course grade will be determined by adding 20% of the final exam grade, 30% of the post test average, and 50% of the average of the objectives, with final grades computed according to the following standard. (The E exempts these courses from GPA calculations.)

92 – 100	AE
83 – 91	BE
75 – 82	CE
0 – 74	RE

Self-Paced students may obtain the “SE” grade only once ever in each course and only if the following conditions are met.:

1. completion of at least half the course **AND**
2. 80% attendance

Lecture students will demonstrate proficiency as according to the instructor’s syllabus. The final grade will be determined using the College Grading System:

92 – 100	AE
83 – 91	BE
75 – 82	CE
0 – 74	RE

Students should refer to the Student Handbook for information on Academic Standing Policy, Academic Honesty Policy, Students Rights and Responsibilities and other policies relevant to their academic progress.

Unit 1 – Rational Expressions I (No Calculators)

Objective 1	Review multiplication and division of fractions, reducing them to lowest terms. Solve application problems involving multiplication and division of fractions.
Reference Pages	pp. 44-50
Practice Problems	p. 50, Concept Quiz, #1-10 pp. 51-52 (Problem Set 2.1), #1-62
Required Homework	p. 50, Concept Quiz, #1-10 pp. 51-52 (Problem Set 2.1), #9,21,31,35,48,53,63,71,75,81
Required for Retest #1	pp. 51-52 (Problem Set 2.1), #11, 19, 38, 50, 65, 73, 76, 77

Objective 2	Review addition and subtraction of rational numbers in fractional form. Solve application problems involving addition and subtraction.
Reference Pages	pp. 53-59
Practice Problems	pp. 59-60, Concept Quiz, #1-8 pp. 60-62 (Problem Set 2.2), #1-103
Required Homework	pp. 59-60, Concept Quiz, #1-8 pp.60-62 (Problem Set 2.2), #35, 43, 57, 65, 85, 89, 99, 101
Required for Retest #1	pp. 60-62 (Problem Set 2.2), #36, 46, 66, 86, 90, 100, 102

Objective 3	Classify real numbers, and perform operations of addition, subtraction, multiplication and division of rational numbers in decimal form.
Reference Pages	pp. 63-64, 66-69 (through Example 1)
Practice Problems	p. 71, Concept Quiz, #1-10 pp. 71-72 (Problem Set 2.3), #1-48 Student Booklet, Objective 3, Practice Set I, II
Required Homework	p. 71, Concept Quiz, #1-10 pp. 71-72 (Problem Set 2.3), #1, 2, 3, 4, 5, 7, 17, 21, 31, 37, 47
Required for Retest #1	Student Booklet, Objective 3, Practice Set I pp. 71-72 (Problem Set 2.3), #14, 20, 28, 34, 40, 42

Unit 2 – Rational Expressions II (No Calculators)

Objective 4	Review Commutative, Associative and Distributive Properties. Add to the list the following properties: Identity Property of Addition and Multiplication, Additive Inverse Property, Multiplication Property of Zero, Multiplicative Property of Negative One, Multiplicative Inverse Property, and the Distributive Property.
Reference Pages	pp. 65-66
Practice Problems	Student Booklet, Objective 4, Practice Sets I, II, and III
Required Homework	Student Booklet, Objective 4, Practice Set I
Required for Retest #1	Student Booklet, Objective 4, Practice Set II

Objective 5	Combine similar terms with rational number coefficients in decimal form, and solve application problems involving rational numbers in decimal form.
Reference Pages	pp. 69-70
Practice Problems	p. 72 (Problem Set 2.3), #49-82
Required Homework	p. 72 (Problem Set 2.3), #53, 59, 63, 71, 75, 79
Required for Retest #1	p. 72 (Problem Set 2.3), #50, 58, 64, 72, 77, 81

Unit 3 – Exponential Notation and Defining Variables (No Calculators)

Objective 6	Know the definition and terminology of exponential notation, simplify numerical expressions involving exponents, and simplify algebraic expressions by combining similar terms.
Reference Pages	pp. 73-75 (Section 2.4a)
Practice Problems	p. 78, Concept Quiz, #1-10 pp. 78-79 (Problem Set 2.4), #1-68
Required Homework	p. 78, Concept Quiz, #1-10 pp. 78-79 (Problem Set 2.4), #7, 9, 13, 19, 31, 39, 45, 53, 57, 61, 65
Required for Retest #1	pp. 78-79 (Problem Set 2.4), #8, 10, 28, 40, 44, 54, 58, 62, 68

Objective 7	Perform operations with exponential expressions and evaluate algebraic expressions involving exponents.
Reference Pages	pp. 76-77 (Section 2.4b)
Practice Problems	pp. 79-80 (Problem Set 2.4), #69-101
Required Homework	pp. 79-80 (Problem Set 2.4), #69, 71, 75, 85, 91, 95
Required for Retest #1	pp. 79-80 (Problem Set 2.4), #70, 72, 82, 84, 89, 96

Objective 8	Translate algebraic expressions in English phrases and English phrases into algebraic expressions, including conversions of units within a measurement system.
Reference Pages	pp. 80-85 (Section 2.5) Student Booklet, Objective 8
Practice Problems	p. 85, Concept Quiz, #1-10 pp. 86-87 (Problem Set 2.5), #1-72 Student Booklet, Objective 8, Practice Sets I, II
Required Homework	p. 85, Concept Quiz, #1-10 pp. 86-87 (Problem Set 2.5), #5, 9, 21, 29, 31, 35, 53-55, 59, 67, 69
Required for Retest #1	Student Booklet, Objective 8, Practice Set I pp. 86-87 (Problem Set 2.5), #10, 12, 26, 28, 34, 36, 38, 42, 44, 50, 60, 64, 67, 69

Unit 4 – Solving Linear Equations (No Calculators)

Objective 9	Review the solving of first degree equations using the addition-subtraction and multiplication-division properties of equality.
Reference Pages	pp. 95-99 (Section 3.1)
Practice Problems	p. 99, Concept Quiz, #1-10 p. 100 (Problem Set 3.1), #1-72
Required Homework	p. 99, concept Quiz, #1-10 p. 100 (Problem Set 3.1), #3,5,11,15,17,25,31,39,43, 47, 53, 69
Required for Retest #1	p. 100 (Problem Set 3.1), #4,6,12,16,18,26,32, 40, 44,48,54, 70

Objective 10	Solve first-degree equations using both the addition-subtraction property of equality and the multiplication-division property of equality.
Reference Pages	pp. 101-103
Practice Problems	p. 105, Concept Quiz, #1-5 p. 106, #1-40
Required Homework	p. 105, Concept Quiz, #1-5 p. 106 (Problem Set 3.2), #1, 7, 13, 23, 29, 39
Required for Retest #1	p. 106 (Problem Set 3.2), #2, 8, 14, 24, 26, 34

Objective 11	Declare variables and write equations to solve word problems.
Reference Pages	pp. 103-105
Practice Problems	p. 105, Concept Quiz, #6-10 pp. 106-107 (Problem Set 3.2), #41-68
Required Homework	p. 105 (Problem Set 3.2), Concept Quiz, #6-10 pp. 106-107 (Problem Set 3.2), #41, 47, 49, 55, 61, 65
Required for Retest #1	pp. 106-107 (Problem Set 3.2), #42, 44, 52, 56, 62, 66

Unit 5 – Solving Linear Equations II

Objective 12	Solve first-degree equations by simplifying both sides and then applying properties of equality.
Reference Pages	pp. 107-109
Practice Problems	pp. 112-113 (Problem Set 3.3), #1-32 Student Booklet, Objective 12, Practice Sets I, II
Required Homework	pp. 112-113 (Problem Set 3.3), #3, 9, 17, 27, 29, 30, 31
Required for Retest #1	Student Booklet, Objective 12, Practice Set I pp. 112-113 (Problem Set 3.3), #4, 6, 18, 23, 28

Objective 13	Solve word problems representing several quantities in terms of the same variable.
Reference Pages	pp. 109-112 Student Booklet, Objective 13
Practice Problems	Student booklet, Objective 12, Practice Set I p. 112, Concept Quiz, #1-8 pp. 113-114 (Problem Set 3.3), #33-57
Required Homework	p. 112, Concept Quiz, #1-8 pp. 113-114 (Problem Set 3.3), #35, 37, 39, 43, 45, 47, 53, 55
Required for Retest #1	pp. 113-114 (Problem Set 3.3), #36, 38, 40, 42, 44, 46, 52, 56

Objective 14	Solve first-degree equations that involve the use of the distributive property and fractional forms. Solve first-degree equations that are contradictions and identities.
Reference Pages	pp. 115-119
Practice Problems	p. 121, Concept Quiz, #1-10 pp. 121-122 (Problem Set 3.4), #1-60
Required Homework	p. 121 (Problem Set 3.4), Concept Quiz, #1-10 pp. 121-122 (Problem Set 3.4), #1, 17, 19, 29, 33, 35, 45, 53, 55, 59
Required for Retest #1	pp. 121-122 (Problem Set 3.4), #10, 14, 20, 24, 32, 38, 44, 54, 56, 58

Objective 15	Solve word problems where variable quantities are multiplied by a rate.
Reference Pages	pp. 119-121 Student Booklet, Objective 15
Practice Problems	pp. 122-123 (Problem Set 3.4), #61-86 Student booklet, Objective 15, Practice Sets I, II
Required Homework	pp. 122-123 (Problem Set 3.4), #61, 63, 65, 69, 73, 75, 79, 80
Required for Retest #1	Student Booklet, Objective 15, Practice Set I pp. 122-123 (Problem Set 3.4), #62, 64, 66, 70, 76, 77

Unit 6 – Solving Inequalities

Objective 16	Solve first degree inequalities, writing the solution set as an inequality in set-builder notation, interval notation, and on a graph.
Reference Pages	pp. 124-130
Practice Problems	p. 131, Concept Quiz, #1-10 pp. 131-132 (Problem Set 3.5), #1-60
Required Homework	p. 131, Concept Quiz, #1-10 pp. 131-132 (Problem Set 3.5), #3, 9, 17, 19, 29, 43, 47, 55
Required for Retest #1	pp. 131-132 (Problem Set 3.5), #4, 8, 16, 20, 31, 44, 48, 56

Objective 17	Solve inequalities that involve the use of the distributive property and fractions. Determine the solution set for compound inequality statements.
Reference Pages	pp. 133-138
Practice Problems	p. 138, Concept Quiz, #1-10 pp. 138-139 (Problem Set 3.6), #1-66
Required Homework	p. 138, Concept Quiz, #1-10 pp. 138-139 (Problem Set 3.6), #5, 11, 15, 25, 29, 33, 35, 39, 49, 51, 63
Required for Retest #1	pp. 138-139 (Problem Set 3.6), #7, 12, 20, 30, 32, 34, 50, 46, 53, 57

Unit 7 – Linear Applications I and Formulas

Objective 18	Use proportions to convert a fraction to a percent, solve basic percent problems, and solve word problems.
Reference Pages	pp. 147-153
Practice Problems:	p. 153, Concept Quiz, #1-8 pp. 153-155 (Problem Set 4.1), #1-73
Required Homework	p. 153, Concept Quiz, #1-8 pp. 153-155 (Problem Set 4.1), #9, 19, 23, 25, 33, 37, 47, 49, 51, 55, 57, 59, 65, 67, 73
Required for Retest #1	pp. 153-155 (Problem Set 4.1), #10, 18, 24, 26, 34, 38, 48, 50, 52, 58, 63, 66, 69

Objective 19	Solve word problems involving discount, selling price, and the simple interest formula.
Reference Pages	pp. 156-160
Practice Problems:	p. 160, Concept Quiz, #1-5 pp. 160-161 (Problem Set 4.2), #1-46
Required Homework	p. 160, Concept Quiz, #1-5 pp. 160-161 (Problem Set 4.2), #23, 25, 27, 29, 31, 34, 36, 37, 39, 40, 41
Required for Retest #1	pp. 160-161 (Problem Set 4.2), #24, 27, 30, 32, 35, 38, 42, 43, 44

Unit 8 – Linear Applications II

Objective 20	Solve equations for a specific variable. Make sure that you memorize the formulas for the areas and perimeters of a rectangle and triangle. All other formulas will be given to you.
Reference Pages	pp. 162-168
Practice Problems:	p. 169, Concept Quiz, #1-10 pp. 169-171 (Problem Set 4.3), #1-60
Required Homework	p. 169, Concept Quiz, #1-10 pp. 169-171 (Problem Set 4.3), #3, 5, 7, 13, 19, 21, 23, 25, 27, 35, 37, 39, 41, 43, 45, 47, 53
Required for Retest #1	pp. 169-171 (Problem Set 4.3), #6, 9, 14, 20, 24, 28, 36, 38, 42, 44, 46, 48, 54, 56

Objective 21	Solve word problems involving simple interest and perimeter.
Reference Pages	pp. 173-175
Practice Problems:	pp. 177-178 (Problem Set 4.4), #1-30 Student Booklet, Objective 21, Practice Set I
Required Homework	pp. 177-178 (Problem Set 4.4), #1,3,7,9,13,15,17,21,23,25,27
Required for Retest #1	pp. 177-178 (Problem Set 4.4), #2,4,8,10,14,16,19,22,24,28

Unit 9 – Linear Applications III

Objective 22	Solve word problems involving distance, rate, and time.
Reference Pages	pp. 175-177
Practice Problems:	pp. 178-179 (Problem Set 4.4), #31-40 Student booklet, Objective 21, Practice Sets I, II, III
Required Homework	pp. 178-179 (Problem Set 4.4), #31, 32, 33, 37, 38 Student Booklet, Objective 22, Practice Set I
Required for Retest #1	pp. 178-179 (Problem Set 4.4), 34, 36 Student Booklet, Objective 22, Practice Set II

Objective 23	Solve word problems involving mixture.
Reference Pages	pp. 179-183 (up to Problem 6)
Practice Problems:	pp. 183-184, Concept Quiz, #1-7 pp. 184-185 (Problem Set 4.5), #13-26, 33-42 Student Booklet, Objective 23, Practice Set I
Required Homework	pp. 183-184, Concept Quiz, #1-7 pp. 184-185 (Problem Set 4.5), #13-25 odd, 33, 35, 36
Required for Retest #1	pp. 183-184 (Problem Set 4.5), #14-26 even, 34, 37, 38, 40

**Unit 10 – Graphing on the Cartesian Plane and Linear Systems
(No Calculators)**

Objective 24	Plot points on a rectangular coordinate system and draw graphs of equations of lines and parabolas by plotting points.
Reference Pages	pp. 192-199
Practice Problems:	p. 199, Concept Quiz, #1-10 p. 200 (Problem Set 5.1), #1-2, 13-26, 29, 31-36
Required Homework	p. 199, Concept Quiz, #1-10 p. 200 (Problem Set 5.1), #1, 13, 19, 23, 29, 33
Required for Retest #1	p. 200 (Problem Set 5.1), #2, 14, 20, 24, 36

Objective 25	Use x and y intercepts to graph linear equations. Graph vertical and horizontal lines. Use linear equations to model problems
Reference Pages	pp. 201-207
Practice Problems:	pp. 207-208, Concept Quiz, #1-10 pp. 207-208 (Problem Set 5.2), #1-43
Required Homework	pp. 207-208, Concept Quiz, #1-10 pp. 207-208 (Problem Set 5.2), #1, 5, 7, 11, 15, 17, 19, 25, 27
Required for Retest #1	pp. 207-208 (Problem Set 5.2), #2, 6, 12, 16, 18, 20, 26, 28

Objective 26	Find the slope of a line between two points, given the equation of a line, and graph lines given a point and the slope.
Reference Pages	pp. 209-215 (up to applications of slope)
Practice Problems:	pp. 216-217, Concept Quiz, #1-8 pp. 217-218 (Problem Set 5.3), #1-18, 41-68
Required Homework	pp. 217-218, Concept Quiz, #1-8 pp. 217-218 (Problem Set 5.3), #3, 7, 11, 15, 41, 43, 49, 57, 58, 63, 67
Required for Retest #1	pp. 217-218 (Problem Set 5.3), #4, 8, 12, 16, 42, 44, 50, 57, 58, 64, 68

Unit 11 – Solving a System of Linear Equations (No Calculators)

Objective 27	Solve a linear system of two equations by graphing.
Reference Pages	pp. 218-221
Practice Problems:	pp. 226, Concept Quiz, #1-8 pp. 226-227, #1-20 Student Booklet, Objective 27, Practice Sets I, II
Required Homework	pp. 226, Concept Quiz, #1-8 pp. 226-227 (Problem Set 5.4), #1, 3, 5, 9, 11, 14, 15
Required for Retest #1	Student Booklet, Objective 27, Practice Set I, #1-7

Objective 28	Solve a linear system of two equations by substitution, and use this method to solve word problems.
Reference Pages	pp. 221-226
Practice Problems:	pp. 226-227, #21-58 Student Booklet, Objective 28, Practice Sets I, II
Required Homework	pp. 226-227 (Problem Set 5.4), #23, 27, 39, 41, 47, 49, 57
Required for Retest #1	pp. 226-227 (Problem Set 5.4), #22, 28, 35, 41, 42, 48, 50, 58 Student Booklet, Objective 28, Practice Set I

Objective 29	Solve systems of equations by the elimination-by-addition method and use this method to solve a word problem.
Reference Pages	pp. 228-235
Practice Problems:	p. 235, Concept Quiz, #1-5 pp. 236-237, #1-34, 45-50, 52
Required Homework	p. 235, Concept Quiz, #1-5 pp. 236-237 (Problem Set 5.5), #1, 7, 9, 11, 28, 45, 49
Required for Retest #1	pp. 236-237 (Problem Set 5.5), #3, 8, 12, 25, 31, 46, 47

Unit 12 – Polynomials I

Objective 30	Name polynomials by the number of terms, and determine the degree of a polynomial.
Reference Pages	pp. 251-252
Practice Problems:	p. 256, Concept Quiz, #1-10 Student Booklet, Objective 30, Practice Sets I, II, III
Required Homework	p. 256, Concept Quiz, #1-10 Student Booklet, Objective 30, Practice Set I
Required for Retest #1	Student Booklet, Objective 30, Practice Set II

Objective 31	Add and subtract polynomials both horizontally and vertically using order of operations and learning terminology.
Reference Pages	pp. 252-256
Practice Problems:	pp. 256-257 (Problem Set 6.1), #9-68
Required Homework	pp. 256-257 (Problem Set 6.1), #13, 17, 21, 23, 33, 37, 41, 49, 57, 61, 63, 65
Required for Retest #1	pp. 256-257 (Problem Set 6.1), #14, 18, 22, 24, 34, 38, 42, 51, 58, 62, 64, 66

Objective 32	Learn exponential laws and multiply polynomials by monomials.
Reference Pages	pp. 258-262
Practice Problems:	p. 263, Concept Quiz, #1-6 pp. 263-264 (Problem Set 6.2), #1-81
Required Homework	p. 263, Concept Quiz, #1-6 pp. 263-264 (Problem Set 6.2), #5, 9, 21, 25, 37, 43, 55, 59, 65, 67, 71, 75
Required for Retest #1	pp. 263-264 (Problem Set 6.2), #13, 17, 23, 35, 45, 56, 60, 64, 68, 72, 67

Objective 33	Multiply polynomials using the distributive property, and learning patterns using the square of a binomial and the product of $(a + b)$ and $(a - b)$.
Reference Pages	pp. 265-270
Practice Problems:	p. 270, Concept Quiz, #1-5 pp. 270-272 (Problem Set 6.3), #1-118
Required Homework	p. 270, Concept Quiz, #1-5 pp. 270-272 (Problem Set 6.3), #7, 9, 21, 23, 33, 37, 57, 75, 81, 83, 95, 105, 107, 109, 115
Required for Retest #1	pp. 270-272 (Problem Set 6.3), #8, 10, 22, 24, 34, 39, 59, 77, 82, 84, 96, 106, 108, 110, 116

Unit 13 – Polynomials II (No Calculators)

Objective 34	Apply the properties of exponents to divide monomials. Divide polynomials by monomials.
Reference Pages	pp. 273-275
Practice Problems:	p. 275, Concept Quiz, #1-5 p. 276 (Problem Set 6.4), #1-50
Required Homework	p. 275, Concept Quiz, #1-5 p. 276 (Problem Set 6.4), #5, 13, 19, 25, 33, 47
Required for Retest #1	p. 276 (Problem Set 6.4), #6, 12, 20, 26, 34, 48

Objective 35	Divide polynomials by binomials.
Reference Pages	pp. 277-280
Practice Problems:	p. 281, Concept Quiz, #1-6 pp. 281-282 (Problem Set 6.5), #1-40
Required Homework	p. 281, Concept Quiz, #1-6 pp. 281-282 (Problem Set 6.5), #1, 5, 11, 13, 15, 19, 23, 25, 27, 37
Required for Retest #1	pp. 281-282 (Problem Set 6.5), #2, 6, 12, 14, 16, 20, 24, 26, 28, 36

Objective 36	Apply the properties of exponents including negative and zero exponents.
Reference Pages	pp. 282-285
Practice Problems:	pp. 287-288, Concept Quiz, #1-4 pp. 288-289 (Problem Set 6.6), #1-84
Required Homework	pp. 287-288, Concept Quiz, #1-4 pp. 288-289 (Problem Set 6.6), #3, 5, 7, 17, 27, 29, 39, 49, 61, 63, 67, 69, 83
Required for Retest #1	pp. 287-289 (Problem Set 6.6), #4, 6, 8, 18, 28, 30, 40, 50, 62, 64, 66, 81

Objective 37	Write numbers in scientific notation, convert back to decimal notation, and use scientific notation to evaluate numerical expressions. (NOTE: Scientific Notation is most often written as 3.0×10^3. In this textbook, it is written as $(3.0)(10^3)$. Either method is correct.)
Reference Pages	pp. 285-287
Practice Problems:	pp. 287-288, Concept Quiz, #5, 6 pp. 288-289 (Problem Set 6.6), #85-123
Required Homework	pp. 287-288, Concept Quiz, #5, 6 pp. 288-289 (Problem Set 6.6), #85, 89, 95, 99, 101, 109, 111, 117
Required for Retest #1	pp. 287-289 (Problem Set 6.6), #86, 90, 96, 100, 104, 110, 112, 118

Unit 14 – Factoring and Solving Equations

Objective 38	Find and factor out the greatest common factor. Factor by grouping.
Reference Pages	pp. 297-300
Practice Problems:	p. 302, Concept Quiz, #1-3, 5 pp. 302-303 (Problem Set 7.1), #1-60
Required Homework	p. 302, Concept Quiz, #1-3, 5 pp. 302-303 (Problem Set 7.1), #3, 9, 11, 17, 25, 31, 39, 45, 47, 49, 53, 57
Required for Retest #1	pp. 302-303 (Problem Set 7.1), #4, 10, 12, 18, 26, 32, 40, 46, 48, 50, 54, 56

Objective 39	Solve quadratic equations by factoring.
Reference Pages	pp. 300-302
Practice Problems:	p. 302, Concept Quiz, #4, 6 p. 303 (Problem Set 7.1), #61-84
Required Homework	p. 302, Concept Quiz, #4, 6 p. 303 (Problem Set 7.1), #61, 65, 69, 81, 83
Required for Retest #1	p. 303 (Problem Set 7.1), #62, 66, 70, 82, 84

Objective 40	Factor the difference of two squares. Solve equations by factoring the difference of two squares.
Reference Pages	pp. 305-308
Practice Problems:	pp. 308-309, Concept Quiz, #1-5 p. 309 (Problem Set 7.2), #1-64
Required Homework	pp. 308-309, Concept Quiz, #1-5 p. 309 (Problem Set 7.2), #1, 5, 9, 13, 21, 25, 37, 41, 49, 53, 61
Required for Retest #1	p. 309 (Problem Set 7.2), #2, 6, 11, 14, 24, 26, 38, 42, 50, 54, 62

Unit 15 – Factoring Quadratic Trinomials and Applications

Objective 41	Factor trinomials of the form $x^2 + bx + c$, and then use factoring of trinomials to solve equations.
Reference Pages	pp. 311-315
Practice Problems:	p. 317, Concept Quiz, #1-3 p. 317 (Problem Set 7.3), #1-50
Required Homework	p. 317, Concept Quiz, #1-3 p. 317 (Problem Set 7.3), #1, 5, 9, 11, 15, 17, 27, 31, 33, 37, 45, 47
Required for Retest #1	p. 317 (Problem Set 7.3), #2, 6, 10, 12, 16, 18, 28, 32, 34, 38, 46, 48

Objective 42	Solve word problems involving consecutive numbers and area/perimeter of rectangles, and use the Pythagorean theorem to solve problems.
Reference Pages	pp. 315-317
Practice Problems:	p. 317, Concept Quiz, #4-6 p. 318 (Problem Set 7.3), #51-68 Student Booklet, Objective 42, Practice Sets I, II
Required Homework	p. 317, Concept Quiz, #4-6 p. 318 (Problem Set 7.3), #52, 53, 55, 59, 61, 65, 67
Required for Retest #1	p. 318 (Problem Set 7.3), #56, 58, 62, 66 Student Booklet, Objective 42, Practice Set I

Unit 16 – Factoring Quadratic Trinomials and Applications

Objective 43	Factor trinomials where the leading coefficient is not 1, and solve equations of that form.
Reference Pages	pp. 319-322
Practice Problems:	p. 322, Concept Quiz #1-5 pp. 322-323 (Problem Set 7.4), #1-50
Required Homework	p. 322, Concept Quiz #1-5 pp. 322-323 (Problem Set 7.4), #1, 3, 13, 17, 27, 31, 37, 49
Required for Retest #1	pp. 322-323 (Problem Set 7.4), #2, 4, 10, 16, 28, 32, 38, 50

Objective 44	Factor perfect-square trinomials, review different types of factoring patterns, and use factoring to solve equations.
Reference Pages	pp. 323-328
Practice Problems:	p. 330, Concept Quiz, #1-7 pp. 330-332 (Problem Set 7.5), #1-70
Required Homework	p. 330, Concept Quiz, #1-7 pp. 330-331 (Problem Set 7.5), #3, 5, 13, 15, 19, 29, 33, 37, 41, 45, 49, 51, 53, 55
Required for Retest #1	pp. 330-332 (Problem Set 7.5), #4, 6, 14, 18, 24, 34, 38, 42, 46, 50, 52, 54, 56

Objective 45	Solve word problems that involve factoring.
Reference Pages	pp. 328-330
Practice Problems:	pp. 331-332 (Problem Set 7.5), #71-85 Student Booklet, Objective 45, Practice Sets I, II
Required Homework	pp. 331-332 (Problem Set 7.5), #71, 73, 75, 77, 78, 81, 82
Required for Retest #1	pp. 331-332 (Problem Set 7.5), #75, 76 Student Booklet, Objective 45, Practice Set I

Unit 17 – Rational Expressions I

Objective 46	Simplify rational expressions to reduced form with the expression given in numbers, as monomial expressions, and polynomial form.
Reference Pages	pp. 404-409
Practice Problems:	p. 409, Concept Quiz, #1-5 pp. 409-410 (Problem Set 9.1), #1-42, 51-68
Required Homework	pp. 409-410 (Problem Set 9.1), #9, 15, 23, 29, 37, 51, 55, 59, 63
Required for Retest #1	pp. 409-410 (Problem Set 9.1), #10, 16, 20, 24, 32, 38, 52, 56, 60, 64

Objective 47	Multiply and divide rational expressions.
Reference Pages	pp. 411-416
Practice Problems:	p. 416, Concept Quiz, #1-5 pp. 416-417 (Problem Set 9.2), #1-50
Required Homework	p. 416, Concept Quiz, #1-5 pp. 416-417 (Problem Set 9.2), #5, 11, 13, 19, 23, 27, 35, 39, 49
Required for Retest #1	pp.416-417 (Problem Set 9.2), #6, 12, 14, 20, 24, 28, 36, 40, 50

Unit 18 –Rational Expressions II

Objective 48	Add and subtract rational expressions using the lowest common denominator.
Reference Pages	pp. 418-424
Practice Problems:	p. 425, Concept Quiz, #1-5 pp. 425-426 (Problem Set 9.3), #1-68
Required Homework	p. 425, Concept Quiz, #1-5 pp.425-426 (Problem Set 9.3), #13, 25, 33, 49, 57, 61, 68a, 68e
Required for Retest #1	pp.425-426 (Problem Set 9.3), #14, 24, 34, 50, 58, 62, 68b, 68d

Objective 49	Add or subtract rational expressions where the denominators can be factored.
Reference Pages	pp. 428-431
Practice Problems:	p. 435, Concept Quiz, #5 p. 436 (Problem Set 9.4), #1-36
Required Homework	p. 425, Concept Quiz, #1-5 pp.425-426 (Problem Set 9.3), #13, 25, 33, 49, 57, 61, 68a, 68e
Required for Retest #1	p. 436 (Problem Set 9.4), #2, 8, 12, 14, 16, 30, 34

Objective 50	Simplify complex fractions. (Learn to use both Method A and Method B.)
Reference Pages	pp. 431-435
Practice Problems:	p. 435, Concept Quiz, #1-4 pp. 436-437 (Problem Set 9.4), #37-59
Required Homework	p. 435, Concept Quiz, #1-4 pp. 436-437 (Problem Set 9.4) Do each of the following problems using BOTH method A AND method B, #37, 43, 49, 47, 55
Required for Retest #1	pp. 436-437 (Problem Set 9.4) Do each of the following problems using BOTH method A AND method B, #38, 44, 48, 50, 56