

College of Staten Island
Department of Mathematics
COURSE OUTLINE Spring 2022
Math 020 – Elementary Algebra

Revised: January 12, 2022

- **Required: MyMathLab Student Access Kit;** Pearson / Addison Wesley. Available for purchase in the CSI Campus Bookstore; or online. Online textbook **accessible with MyMathLab: Elementary Algebra, Concepts and Applications, 10th Edition**, by Bittinger/Ellenbogen
- Reviews, Practice Sheets, and Problem sets :
<https://www.math.csi.cuny.edu/Courses/Remediation/Mth020/>
- CUNY Final Exam: <http://www.cuny.cuny.edu/testing/cunyelementaryalgebrafinalexam.cfm>
- During each class meeting use problems from the **Practice Sheet and Problem Set** that relate to the Lecture as additional practice and/or reinforcement.
- Before each in class exam use **Problem sets** (which are Sample CEAFE problems) and **Review sheets** for Review.
- Before Final exam (CEAFE) use **Sample exams C, D and E** for Review.

Week	Lecture	Section	TOPICS	HOMEWORK PROBLEMS
1	Orientation		Distribute following Handouts : 1.Student course outline, 2.Student course orientation, 3.MML instructions, 4.Students must bring Practice Sheet #1 for Lectures 1-10	
	1	1.1	Evaluate Variable Expressions Translating Verbal expressions to an Algebraic Expression or Equation	
		1.2	Simplify Variable Expressions	
	2	1.8	Exponents and Order of Operations	
	3	2.1	Solving Equations: Addition and Multiplication Principle	
	4	2.2	Solving Equations: Using both Principles Clearing Parenthesis Isolating Variables on one side	
2	5	2.3	Formulas: Solving for a Variable	
	6	2.4	Converting Percent Notation/Decimal Notation Percent Equations and Applications	
	7	2.5	Percent Increase or Decrease	
	8	2.5	Translating Sentences into Equations	

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			and Solving Perimeter Word Problems	
3	9	2.6	Solving Inequalities	
	10	3.1	Plotting Points	
		3.2	Solutions of Linear Equations Graphing Linear Equations Students must bring Problem set 1 and Review Sheet 1 to class.	
	11		Problem Set 1: Instructor will work it out with students.	
	12		Review sheet for exam 1	
4	13		Optional Review first 15 min; then EXAM# 1	
	14		EXAM #1 continued	
	15	3.3	Students must bring Practice Sheet #2 for Lectures 15-26 Graphing Using Intercepts Graphing Horizontal and Vertical Lines	
	16	3.4	Rates	
5	17	3.5	Finding Slope on a Graph Zero and Undefined Slopes Slope Formula	
	18	3.6	Writing Linear Equations in Slope Intercept Form Using Y-intercept and Slope to Graph Lines Slope and Parallel Lines	
	19, 20	3.7	Writing Equations Using Point Slope Form Writing Equation of a line containing 2 points	
6	21	7.1	3 Types of Systems Determine whether an ordered pair is a solution to a System of Equations Solving a System of Two Equations by Graphing	
	22	7.2	Solving a System of Two Equations by Substitution	

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	23	7.3	Solving a System of Two Equations by Elimination	
	24	6.7	Word Problems Involving Proportions (p. 419 Example 5 and 6) Students must bring Problem set #2 and Review sheet #2 to class	
7	25		Problem Set 2: Instructor will work it out with students.	
	26		Review sheet For Exam 2	
	27		Optional 15 min Review, then EXAM #2	
	28		EXAM#2 continued	
8	29		Students must bring Practice Sheet #3 for Lectures 29-40	
		4.1	Exponents and Their Properties	
	30	4.2	Polynomials; Degree and Coefficients	
	31	4.3	Addition and Subtraction of Polynomials	
	32	4.4	Multiplication of Polynomials	
9	33	4.5	Products of Two Binomials (FOIL) Special Products	
	34	4.7	Division of Polynomials	
		4.8	Negative Exponents	
	35	5.1	Factoring out GCF Factoring by Grouping	
	36	5.2	Factoring Trinomials with leading coefficient of 1	
10	37, 38	5.3	Factoring Trinomials with leading coefficient greater than 1	
	39	5.4	Difference of Two Squares	

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	40	5.3 and 5.5	Factor by Grouping Polynomials with 2 different variables Students must bring Problem set #3 and Review sheet #3 to class	
	41		PROBLEM SET 3: Instructors will work it out with students	
11	42		Review sheet for Exam 3	
	43		Optional 15 min Review; then EXAM#3	
	44		EXAM #3 continued	
			Students must bring Practice Sheet #4 for Lectures 45-52	
12	45	5.6	Solving Quadratic Equations by Factoring	
	46	8.1	Radical Expressions	
		8.2	Multiplying and Simplifying Radicals	
	47	8.3	Dividing Radical Expressions Rationalizing Radicals	
13	48, 49	8.4	Adding and Subtracting Radical Expressions Multiplying Radicals using distributive law	
	50	8.5	Radical Equations	
	51	8.6	Solving Problems using Pythagorean Theorem Students must bring Problem set #4 to class.	
14	52		Problem Set 4: Instructor will work it out with students. Bring sample exams C, D and E to class	

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	53		REVIEW FOR FINAL EXAM; CUNY sample exam C, D and E	
	54		REVIEW FOR FINAL EXAM; CUNY sample exam C, D and E	
	55		REVIEW FOR FINAL EXAM CUNY sample exam C, D and E	
	56		REVIEW FOR FINAL EXAM CUNY sample exam C, D and E	
15			Departmental common Exam, This is a 100 minute Multiple choice exam taken during final exam week. Dates, times and locations to be announced	