

**The College of Staten Island
Office of Academic Support**

Math 20 Course Outline - January 2023 (DD)

OER Text:

Arithmetic/Algebra Edition 3.0

by Marianna Bonanome, Holly Carley, Samar ElHitti, Thomas Tradler & Lin Zhou

http://academicworks.cuny.edu/ny_oers/5

OER Homework:

Arithmetic/Algebra Homework by Samar ElHitti, Ariane Masud & Lin Zhou

http://www.citytech.cuny.edu/mathematics/docs/MAT0650_HW.pdf

Supplemental Materials and Practice Problems

Calculator: Scientific Calculator Only

No Graphing or Programmable Calculators. Cell phones are not allowed

Day	Chapter	Topics	In-Class Practice Problems	Home Practice Problems
1 1/3/23	1	Operation with Integers	<u>Pgs. 1-2:</u> 1c, 1e, 2a, 2c, 3a, 3c, 4a, 5a, 7c, 8a, 10a, 10c, 10e	<u>Pgs. 1-2:</u> 1b, 1d, 1f, 1h, 2b, 2d, 3b, 3d, 4b, 5b, 7b, 7d, 8b, 10b, 10d, 10g
	Supplement	Absolute Value	<u>Practice Problems:</u> 1,3	<u>Practice Problems:</u> 2,4
	2	Multiplication and Division of Fractions	<u>Pgs. 4-6:</u> 1a, 2a, 4a, 4c, 4e, 4g, 10a, 11a, 11c, 12a, 12c	<u>Pgs. 4-6:</u> 1b, 1c, 2b, 2c, 4b, 4d, 4f, 4h, 10b, 11b, 12b
	2	Addition and Subtraction of Fractions	<u>Pgs. 5-6:</u> 6a, 6c, 8a, 9a, 9c	<u>Pgs. 5-6:</u> 6b, 6d, 8b, 8c, 9b, 9d
2 1/4/23	4	Evaluating Algebraic Expressions	<u>Pgs. 10-11:</u> 1a, 1c, 4a, 7a, 7c, 7e	<u>Pgs. 10-11:</u> 1b, 1d, 4b, 7b, 7d, 7f
	16	Solving Linear Equations	<u>Pg. 32:</u> 1a, 1c, 1e, 1g, 2a, 2e, 2g, 2i	<u>Pg. 32:</u> 1b, 1d, 1f, 2b, 2d, 2f, 2h, 2j
	16, 17	Solving Linear Equations with Fractions	<u>Pg. 32:</u> 1h, 2m; <u>Pg. 35:</u> 10a, 10c	<u>Pg. 35:</u> 10b, 10d, 10e
	19	Solving Literal Equations and Formulas	<u>Pg. 38:</u> 1, 3, 5, 9, 11	<u>Pg. 38:</u> 2, 4, 6, 8, 10
	21	Solving Linear Inequalities	<u>Pg. 41:</u> 1a, 1c, 1e, 1g, 1i	<u>Pg. 41:</u> 1b, 1d, 1f, 1h, 1j
				MMT Quiz 1 (Mandatory)
3 1/5/23	3	Decimals	<u>Pg. 8:</u> 1a, 1c, 1e	<u>Pg. 8:</u> 1b, 1d, 1f
	3	Converting: Fraction, Decimal & Percent	<u>Pgs. 8-9:</u> 2a, 2c, 4a, 4e, 5a, 5e	<u>Pgs. 8-9:</u> 2b, 2d, 4b, 4d, 5b, 5d
	18	Percent Problems and Applications	<u>Pg. 37:</u> 6	
	Supplement	Percent Problems and Applications	<u>Practice Problems:</u> 5, 7, 9, 11, 13, 15	<u>Practice Problems:</u> 6, 8, 10, 12, 14, 16
	Supplement	Percent Increase/Decrease	<u>Practice Problems:</u> 17, 19, 21	<u>Practice Problems:</u> 18, 20, 22

4	18 Supplement	Ratio and Proportion Ratio and Proportion	<u>Pg. 37:</u> 9, 10 <u>Practice Problems:</u> 23, 25	<u>Practice Problems:</u> 24, 26
	18	Translating Statements to Equations and Solving	<u>Pgs. 36-37:</u> 1a, 1c, 1e, 1g, 5a, 5c	<u>Pgs. 36-37:</u> 1b, 1d, 1f, 5b, 5d
	18 Supplement	Perimeter and Word Problems	<u>Pgs. 36-37:</u> 2, 11 <u>Practice Problems:</u> 27	<u>Practice Problems:</u> 28, 29
1/6/23		Review for Exam I	Review Sheet Handout	Review Sheet Handout MMT Quiz 2 (Mandatory)
5	25	Exam I (75 Minutes) Plotting Points and Verifying Solutions	<u>Pgs. 47-49:</u> 1, 3, 4a, 4c	<u>Pgs. 47-49:</u> 2, 4b, 4d
	25	Graphing Linear Equations Using the Chart Method	<u>Pg. 49:</u> 5a, 5c, 5e	<u>Pg. 49:</u> 5b, 5d
1/9/23	26	Graphing Linear Equations Using the Intercept Method	<u>Pg. 50:</u> 1, 3	<u>Pg. 50:</u> 2
6	26	Slope-Intercept Form	<u>Pgs. 50-53:</u> 4, 6	<u>Pgs. 51-52:</u> 5, 7, 8
	26	Slope of a Line/Point-Slope Form	<u>Pg. 52:</u> 10, 12	<u>Pg. 52:</u> 11, 13; <u>Graphing Handout</u>
	5	Laws of Exponents	<u>Pgs. 12-13:</u> 1,3b, 3f, 4a, 5c, 9b, 10a	<u>Pgs. 12-13:</u> 2, 3c, 3e, 4b, 4c, 5d
1/10/23	5	Zero and Negative Exponents	<u>Pg. 13:</u> 6a, 6c, 6e, 7, 9a, 10d	<u>Pg. 13:</u> 6b, 6d, 8, 9c, 10c MMT Quiz 3 (Mandatory)
7	8	Addition and Subtraction of Polynomials	<u>Pg. 18:</u> 1a, 2a, 2c, 2e, 2g, 3a, 3c	<u>Pgs. 18-19:</u> 1b, 2b, 2d, 2f, 3b, 3d, 3e
	9	Multiplication of Polynomials and Multiple Operations	<u>Pgs. 20-21:</u> 1a, 1c, 1e, 2a, 2c, 3a, 3c, 4a, 4c	<u>Pgs. 20-21:</u> 1b, 1d, 1f, 2b, 2d, 3b, 3d, 4b
1/11/23	10	Division of Polynomials	<u>Pg. 22:</u> 1a, 1c, 2a, 2c, 2e, 2g	<u>Pgs. 22-23:</u> 1b, 1d, 2b, 2d, 2f, 2h, 2i Review Sheet Handout
8	12	Exam II (75 Minutes) Factoring: GCF and Grouping Methods	<u>Pgs. 26-27:</u> 1a, 1c, 2a, 2c, 2e, 3a, 3c, 4a, 4c, 5a, 5c, 5e, 5g	<u>Pgs. 26-27:</u> 1b, 1d, 2b, 2d, 2f, 3b, 3d, 4b, 5b, 5d, 5f, 5h
1/12/23	14	Factoring Trinomials Leading Coefficient of 1 (a=1)	<u>Pg. 29:</u> 1a, 1c, 1e, 1g, 1i	<u>Pg. 29:</u> 1b, 1d, 1f, 1h, 1j MMT Quiz 4 (Mandatory)

9	14	Factoring Trinomials Leading Coefficient Greater than 1 ($a > 1$)	<u>Pg. 29</u> : 2a, 2c, 2g	<u>Pg. 29</u> : 2b, 2d, 2f, 2h
	13	Difference of Two Squares	<u>Pg. 28</u> : 1a, 1c, 1h, 2a, 2c	<u>Pg. 28</u> : 1b, 1d, 1i, 2b, 2d
	20	Solving Quadratic Equations by Factoring	<u>Pg. 39</u> : 1a, 1d, 1f, 2a	<u>Pg. 39</u> : 1b, 1e, 1g, 2b
	27	Systems of Linear Equations - Using Elimination by Addition Method	<u>Pg. 54</u> : 1a, 1c	<u>Pg. 54</u> : 1b, 1d
		Systems of Linear Equations - Using Substitution Method	<u>Pg. 54</u> : 2, <u>Pg. 55</u> : 1c	
	Supplement	Systems of Linear Equations - Using Graphical Method	<u>Practice Problems</u> : 30, 32, 34, 36, 38, 40	<u>Practice Problems</u> : 31, 33, 35, 37, 39, 41
1/13/23				MMT Quiz 5 (Mandatory)
10	11	Simplifying Radical Expressions	<u>Pg. 24</u> : 1a, 1c, 1e, 1g, 1i, 1k	<u>Pg. 24</u> : 1b, 1d, 1f, 1h, 1j
	11	Multiplication of Radical Expressions	<u>Pg. 25</u> : 6, 8, 11a	<u>Pg. 25</u> : 7, 9, 11b
1/17/23	11	Division of Radical Expressions	<u>Pg. 25</u> : 12a, 12c	<u>Pg. 25</u> : 12b, 12d
11	11	Addition and Subtraction of Radical Expressions	<u>Pg. 24</u> : 4a, 4c, 4e	<u>Pg. 24</u> : 4b, 4d, 4f
	Supplement	Solving Quadratic Equations Using the Square Root Principle	<u>Practice Problems</u> : 42, 44, 46, 48	<u>Practice Problems</u> : 43, 45, 47, 49
	20	Pythagorean Theorem (Right Triangles)	<u>Pgs. 39-40</u> : 3, 5	<u>Pg. 40</u> : 4
1/18/23		Review for Exam III	Review Sheet Handout	Review Sheet Handout MMT Quiz 6 (Mandatory)
12		Exam III (75 Minutes)		
1/19/23		Review for Final	Review Sheet Handout	
13		Review for Final	Review Sheet Handout	
1/20/23		Review for Final	Review Sheet Handout	
14		Review for Final		
1/23/23		Final (100 Minutes)		

2023 Winter Immersion Program – Math 20 Workshops

As a student in this free course, you are given the opportunity to complete the MTH 20 requirements (non-credited developmental course that is offered by CSI at regular tuition rates).

To pass MTH 20, students must:

- not be absent for reasons other than medical or personal emergencies (which must be appropriately documented)
- not be absent in excess of 12% of total workshop hours
- make-up all absences with tutoring (appointments must be made in 1L-117)
- have an average passing grade of 70 which is calculated as follows:
 - 65% based on three in-class exams and the online homework quizzes
 - 35% based on the cumulative final exam
- complete online homework quizzes and receive 70 and above on all homework before each test is due

EXAMS

There will be three in-class exams and a cumulative final exam. No make-up exams due to absences are permitted after the exam return date.

HOMEWORK, ONLINE TESTS AND STUDY PLAN

- Students are required to do the homework from the booklet (see your course outline for each day's assigned homework problems).
- Students must complete the online homework and score 70 or above the day each online homework is assigned on the course outline.
- Online quizzes may be completed on your personal computer at home or on campus in 1L-212.
- Free tutoring is provided by the Center for Academic Student Assistance (CASA) during the immersion program. Times and locations of the tutoring services will be given to you by your instructor.
- As you complete online tests in MyMathTest, the program will generate a personalized Study Plan showing your areas of weakness and providing questions for further practice. You are **strongly encouraged** to work on the study plan to achieve mastery in areas of weakness. Your instructor will monitor your progress.

GRADES

The only grades given in this course are the following:

- S:** 85% or better course average (includes fulfillment of all requirements stated above). Students must take **all** exams in order to pass the course.
- P:** 70% or better course average (includes fulfillment of all requirements stated above). Students must take **all** exams in order to pass the course.
- F:** Course average is below 70%