

MA101

Preparatory Mathematics

[Onsite]

Course Description:

The purpose of this remediation guide is to assist students to acquire or review those pre-college level math skills needed for success in concurrent and future course work.

Prerequisite(s) and/or Corequisite(s):

None.

Credit hours: 0

Contact hours: 0 (Theory Hours)

STUDENT GUIDE

Instructor: _____

Office hours: _____

Class hours: _____

MAJOR SKILL AREAS

1. Pre-algebra Review
2. Geometry Review
3. Real Numbers
4. Equations and Inequalities
5. Polynomials
6. Rational Expressions
7. Graphs
8. Systems of Equations
9. Radicals and Complex Numbers
10. Quadratic Equations

RESOURCES

References

- *Tools for Problem Solving, Part V “Mathematics”, extracted from Elayn Martin-Gay, Algebra: A Combined Approach and Basic College Mathematics, Pearson/Prentice Hall, 1999. [On CD, Issued with the Problem Solving course]*
- <http://www.interactmath.com>
Then choose “Martin-Gay: Algebra A Combined Approach, 2e ENHANCED”

All links to web references are always subject to change without prior notice.

EVALUATION & GRADING

Evaluation in this program can be utilized as part of the “Outside Assignments” grade in Problem Solving. The instructor will periodically ask you to turn in some “Check Yourself” exercises listed in the Units.

SCHEDULE / REFERENCES

Unit	Tools book, Part V	interactmath.com
1: Fractions and Decimals	R2 - A: Writing Equivalent Fractions B: Simplifying Fractions C: Multiplying and Dividing Fractions D: Adding and Subtracting Fractions	0.2
	R3 - A: Writing Decimals as Fractions D: Writing Fractions as Decimals	0.3
2: Words and Formulas	1.1 - B: Translating Sentences into Mathematical Statements	1.2
	1.2 - D: Translating Words to Symbols	1.3
	2.6 Formulas and Problem Solving	2.6
3: Working with Expressions	1.2 - A: Exponents & Order of Operations	1.3
	B: Evaluating Algebraic Expressions	
	C: Solutions of Equations	
	2.1 Simplifying Expressions	2.1
	2.3 - A: Using the Multiplication Property	2.3
4: Reading Graphs	1.8 Reading Graphs	
	3.1 The Rectangular Coordinate System	3.1
5: Proportions and Linear Graphing	2.7 Percent, Ratio, & Proportion	2.7
	3.2 Graphing Linear Equations	3.2
	3.3 Intercepts	3.3

6: Equations of Graphs & geometry	3.4 Slope	3.4
	7.2 - A: Write Equation using Point-Slope	7.2
	B: Equations of Vertical & Horizontal Lines	
	Appendix A - Geometry	
	A.4 Area	
	A.5 Volume	
7: Exponents and Polynomials	4.1 - A: Evaluating Exponential Expressions	4.1
	4.2 - C: Writing Numbers in Scientific Notation	4.2
	4.3 - D: Combining Like Terms	4.3
	4.4 Adding & Subtracting Polynomials	4.4
	4.5 Multiplying Polynomials	4.5
8: Special Products & Factoring	4.6 Special Products	4.6
	5.1 Greatest Common Factor	5.1
	5.5 Factoring Perfect Square Trinomials & the Difference of Two Squares	5.5
9: Intro to Radicals	9.1 Radical Expressions	9.1
	9.2 Rational Exponents	9.2
10: Radical Expressions & Quadratic Equations	9.3 Simplifying Radical Expressions	9.3
	9.4 Adding, Subtracting, & Multiplying Radical Expressions	9.4
	10.1 Quadratic Equations: A: Using the Square Root Property	10.1
	10.2 - A: Using the Quadratic Formula	10.2

Each unit is anticipated to take about one week. Math skills are scheduled at least one week before they would normally be scheduled in the Problem Solving course. Actual pacing of the schedule may be coordinated with the Problem Solving course.