

MA092 Intermediate Algebra
Tentative Topical Outline
Fall 2006

As you follow the text examples, be sure to omit the following:

Section	Omit
1.2	Ex 5 & 6
1.6	Ex 3
2.1	Ex 4 & 5
2.2	Ex 2
3.1	Ex 2
3.3	Ex 5
6.6	Ex 3 & 4
7.6	Ex 3 & 4
8.2	Ex 1

DATE	TEXT MATERIAL	WHAT YOU WILL LEARN	HW ACTIVITIES
Day 1	Investigation 1 Section 1.1	[1] Write a linear equation to describe a given situation. [2] Graph a linear equation labeling at least two points on the graph. [3] Use a graph of a linear equation to answer question about the situation depicted. [4] Determine the intercepts of the graph of a linear equation. [5] Graph a linear equation using intercepts.	Page 9: 1, 3, 5, 7, 9, 13, 15, 17
Day 2	Sections 1.2 & 1.3 <u>1.2: Skip Ex 5 & 6b</u>	[6] Solve a linear equation for y. Then, graph equation on a graphing calculator using an appropriate window. [7] Find the coordinates of points on a graph using a graphing calculator. [8] Calculate the slope of a given line. [9] Use the graphing of a line to answer questions concerning slope. [10] Given a table of values, determine whether the points lie on a straight line.	Page 21: 1, 3, 5, 9, 15, 19a, 19b, 21a, 21b Page 33: 1, 3, 5, 7, 11, 17, 19, 25, 27, 31, 35
Day 3	Investigation 2 Section 1.4	[11] Convert a linear equation to slope-intercept form and graph the equation using the slope and the y-intercept. [12] Given the slope and y-	Page 56: 1, 5, 7, 11, 13, 15, 19, 21, 23, 29, 31, 33, 37

		intercept, write the equation of the line. [13] Match a linear equation with its graph.	
Day 4	Section 1.6 <u>Skip Ex 3</u>	[14] Graph and find the equations of vertical and horizontal lines. [15] Say whether the slope of a given line is positive, negative, or zero. [16] Given two lines, say which one has a greater slope. [17] Say whether two lines are parallel, perpendicular, or neither.	Page 91: 1, 3, 5, 7, 9, 11, 13, 19, 27, 29
Day 5	Sections 2.1 & 2.2 <u>2.1: Skip Ex 4 & 5</u> <u>2.2: Skip Ex 2</u>	[18] Say whether a point satisfies a given linear equation. [19] Say whether a system is inconsistent or consistent. [21] Use the "Intersect" feature on the graphing calculator to solve systems graphically. [22] Solve a system graphically, by substitution, and/or by elimination (linear combinations.)	Page 124: 1, 3, 7, 9, 11, 13, 17 Page 138: 1, 3, 5, 13, 15
Day 6		CATCH UP DAY/ REVIEW	Page 101: 1, 3, 5, 7, 9, 11, 13, 17, 19, 21, 23, 25, 27, 33, 35, 37, 41, 45, 47, 51, 53 Page 191: 1, 3, 5, 7, 9
Day 7	TEST # 1	Covers targets [1] thru [22] from Chapters 1 & 2	
Day 8	Investigation 4 Section 3.1 <u>Skip Ex 2</u>	[23] Solve a quadratic equation by extracting the roots. [24] Solve story problems by extraction of roots.	Page 205: 1, 3, 5, 7, 9, 25, 27, 31, 33, 35, 41, 43
Day 9	Investigations 5 & 6 Section 3.2 <i>(See Appendix A6 for more factoring practice.)</i>	[25] Given a story situation involving a quadratic equation, model the situation with diagrams, tables, graphs, and/or equations concerning the situation.	Page 218: 1, 3, 5, 7, 9, 11, 15
Day 10	Section 3.3 <u>Skip Ex 5</u>	[26] Factor a polynomial. [27] Solve a quadratic equation by factoring. [28] Given the solutions to a quadratic equation, write the equation in standard form.	Page 221: 17, 19, 21, 23 Page 227: 1, 3, 5, 7, 9, 11, 13, 15, 41
Day 11	Section 3.4	[29] Describe what the graph of a quadratic equation will look like compared to the basic parabola $y = x^2$. [30] Sketch the graph of a quadratic	Page 241: 1, 3, 5, 9, 11, 13, 17, 19, 21, 23

		equation showing the vertex, the y-intercept, the x-intercepts, and two other points on the graph.	
Day 12	Section 3.5	[31] Solve a quadratic equation by completing the square.	Page 253: 1, 3, 9, 11, 13, 15, 17
Day 13	Section 3.6	[32] Solve a quadratic equation by using the quadratic formula. [33] Round solutions to quadratic equations to a specified number of decimal places <u>or</u> write the solutions in standard complex	Page 262: 1, 3, 5, 9, 13
Day 14		CATCH UP DAY / REVIEW	Page 268: 1, 3, 11, 13, 15, 21, 29, 33, 34
Day 15	TEST # 2	Covers targets [23] to [33] from Chapter 3	
Day 16	Section 5.1	[34] Say whether a given situation represents a function. [35] Evaluate a function at a given value. [36] Use the graph of a function to answer questions about the [37] Given the equation <u>equation</u> of a function, construct a table of values.	Page 351: 1, 3, 7, 11, 15, 17, 23, 27, 31, 39, 41, 43, 45, 47, 51
Day 17	Section 5.2	[38] Say whether a graph represents a function. [39] Given a rule or a table of values for a function, construct a graph of the function labeling at least three points.	Page 368: 1, 9, 11, 13, 15, 33, 35, 37, 39, 41
Day 18	Section 5.3 Investigation 9	[40] Simplify expressions involving cube roots or absolute values. [41] Given a rule, construct a graph of the function labeling at least three points. [42] Use the graph of function to answer questions about the [43] Match a function <u>function</u> with its graph.	Page 389: 1, 3, 5, 7, 9, 15, 17, 19, 25, 31, 37
Day 19	Investigation 10 Section 6.1	[44] Simplify expressions involving positive or negative exponents. [45] Convert a number from standard notation to scientific [46] Convert notation <u>notation</u> in scientific notation to standard notation. [47] Solve problems conducive to scientific notation.	Page 454: 1, 3, 7, 9, 21, 23, 25, 43, 45, 47
Day 20	Sections 6.2 & 6.3	[48] Simplify expression involving fractional exponents. [49] Convert radical expressions to fractional exponents. [50] Convert fractional exponents to radical expressions.	Page 470: 1 thru 17 odd, 29, 31, 35, 37, 39, 41, 43, 45 Page 487: 1, 3, 5, 13, 15, 17, 19,

		[51] Answer questions concerning application situations, which involve fractional exponents or radicals. [52] Solve equations involving radicals or fractional exponents.	31, 33, 35, 39, 41, 43, 47, 49
Day 21	Section 6.6 <u>Skip Ex 3 & 4</u>	[53] Solve radical equations algebraically and/or graphically.	Page 527: 1, 3, 5, 7, 15, 17, 19, 21
Day 22		CATCH UP DAY / REVIEW	Page 434: 1, 3, 5, 7, 11, 15, 19, 21 Page 532: 1, 3, 5, 11, 13, 15, 17, 29, 31, 33, 39, 41
Day 23	TEST # 3	Covers targets [34] thru [53] from Chapters 5 & 6	
Day 24	Section 7.2	[54] Say whether a given exponential function increases or decreases. [55] Graph an exponential function showing the y-intercept and two other points on the graph. [56] Solve exponential equations in which a common base can be isolated.	Page 570: 1, 3, 5, 9, 15, 21
Day 25	Section 7.3	[57] Evaluate logarithmic equations. [58] Convert an exponential equation to a logarithmic equation. [59] Convert a logarithmic equation to an exponential equation. [60] Solve logarithmic equations. [61] Solve exponential equations, which require conversion to logarithmic form. [62] Given an application situation involving exponential growth or decay, answer questions about the situation.	Page 583 1, 3, 5, 7, 9, 11, 13, 15, 19, 21, 27, 29, 31, 33, 37
Day 26	Sections 7.4 & 7.6 <u>7.6: Skip Ex 3 & 4</u>	[63] Given an exponential function construct a graph of its inverse logarithmic function. [64] Solve logarithmic equations, which require conversion to exponential form.	Page 599: 1, 3, 5, 7, 15, 17, 19, 25, 27, 29, 31, 33, 35, 37, 59 Page 627: 1, 5, 7, 21, 23, 25, 27
Day 27	Investigation 13 Section 8.1	[65] Multiply two polynomials writing the answer in descending order. [66] Given an application situation involving polynomial functions, answer questions about the situation.	Page 651: 1, 3, 5, 27, 29, 43, 49
Day 28	Section 8.2 <u>Skip Ex 1</u>	[67] Given the equation of a rational function: a) determine its horizontal and vertical asymptotes b) determine its intercepts	Page 668: 13, 15, 17, 19, 21

		c) construct the graph of the function labeling the intercepts and asymptotes.	
Day 29		CATCH UP/ REVIEW	Page 637: 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 57, 59, 61 Page 726: 1, 7, 11, 13, 15
Day 30	TEST # 4 (FINAL)	Covers all MA092 targets and emphasizes Chapters 7 & 8	

MA 092

This table presents your options for credit math classes after you complete .MA 092. Be sure to check the FCC catalog or speak to your advisor to find out which course(s) is(are) required for your field of study. If you are getting a General Studies degree, you may choose any of the courses below. **Other majors may require specific courses, so be informed!**

Course	Take this if you...	Do you need a "C" or better in MA 092 to enroll?
MA 103 Foundations of Mathematics 3 credits	...want a general liberal arts math class that will introduce you to different fields in mathematics	No
MA 105 Fundamental Concepts of Mathematics I 4 credits	...are pursuing an Early Childhood/Elementary Ed. Degree	Yes
MA 106 Fundamental Concepts of Mathematics II (Geometry) 4 credits	... are pursuing an Early Childhood/Elementary Ed. Degree	Yes
MA 115 Mathematics of Finance 3 credits	...want a general course focused on finance	No
MA 111 Algebra and Trigonometry 4 credits	...are planning to continue onto Calculus, or need it for your program	Yes
MA 201 Applied Calculus	...want a one-semester business-focused calculus course	Yes

3 credits		
MA 202 Introduction to Discrete Mathematics 3 credits	...are pursuing a degree in computing or are interested in mathematics for computer applications	No
MA 206 Elementary Statistics 3 credits	...want a good, relevant general stat course for any major	Yes
MA 207 Probability and Statistics 4 credits	...same as above with the addition of probability for more credit (needed for some programs)	Yes

REQUIRED MATH COURSES FOR SELECTED MAJORS:

<i>FIELD OF STUDY</i>	<i>REQUIRED MATH COURSE</i>
Elementary Education	MA105*, MA106*, MA207
Social Work Psychology Sociology	MA206
Business Information Systems Management	MA206, MA201
Pre-Nursing (Transfer)	MA111
Pre-Physical Therapy (Transfer)	MA206, MA111, MA210**
Pre-Dental Hygiene (Transfer) Pre-Medical Technology (Transfer)	MA206, MA111
Pre- Pharmacy (Transfer)	MA111, MA210**
Computer Science	MA202, MA210**
Engineering Architecture	MA210**
Sciences	MA111*** or MA206

Other Majors	(Check catalog or with advisor!) MA103 may be an option.
--------------	---

- * MA105, MA106, restricted to students planning to major in elementary education
- ** MA210 prerequisite = MA111
- *** Although MA206 could be appropriate, MA111 preferred as many science majors require Calculus.

If you have any questions, please see your advisor.