

Course Outline

Math 99 ABC – Spring 2009

Class 1 – Wednesday, January 21

Lecture: Course Information (Syllabus, Calendar of Events, Course Outline, Textbook Information, Calculator Information, List of Topics)
Natural numbers, integers, rational, numbers, irrational numbers, and real numbers (1.1 Concepts 3)
Basic Operations (1.2 Concept 1)
Square Roots (1.2 Concept 4 and 11.4 Concept 1, 2)
Division with Remainder

Homework: Questions and Review Set 1

Class 2 – Monday, January 26

Lecture: Order of Operations, Parentheses (1.2 Concept 5 and handout)
Algebraic Expressions 1 – Definition, Evaluating (1.2 Concept 2 and handout)
Algebraic Expressions 2 – Simplifying
Combining like terms (1.6 Concept 5)
Equations and Inequalities
Solution of an equation or inequality (2.1 Concept 1)
Absolute value (1.1 Concept 6)

Homework: Problem Set 1

Class 3 – Wednesday, January 28

Lecture: Multiplying Algebraic Expressions (FOIL)
Complete squares and Conjugates
The difference of squares theorem
Multiplying Radical Expressions

Quiz 1

Homework: Problem Sets 2 and 3

Class 4 – Monday, February 2

Lecture: Interval notation (2.7 Concept 2)
Factoring 1
- GCF (6.1 Concepts 1, 2, and 3)
- Difference of two squares (6.5 Concept 1)
Operations on algebraic expressions (5.5, 5.6)
The zero product rule (6.7 Concepts 1, 2, and 3)
Quadratic equations
Absolute value Equations (10.3)

Homework: Problem Set 4

Also posted: Integers and Simplifying Algebraic Expressions

Class 5 – Wednesday, February 4

Lecture: Review of linear Equations (2.1, 2.2)
Review of Rules of Exponents (5.1, 5.2)
Review of zero and negative exponents (5.3)

Quiz 2

Also posted: Exam 1 Information, Review for Exam 1, Radical Expressions, Factoring 1

Class 6 – Monday, February 9

Lecture: Factoring by completing the square (handout, Parts 1 and 2)
Fractions as exponents (11.2)

Class 7 – Wednesday, February 11

Exam 1

Class 8 – Wednesday, February 18

Lecture: Completing the square (practice)
Operations on radical expressions (handout, 11.1, 11.3, 11.4, 11.5)
Quadratic equations with irrational solutions (12.1)
Rationalization (11.6)
Homework: Problem Sets 5 and 6

Class 9 – Monday, February 23

Lecture: Rational Expressions (7.1 – 7.4)
Graph of a parabola (handout, 8.3, 12.4)
Triangle inequality
Perimeter
Area of rectangles and right triangles
Homework: Problem Set 7

Class 10 – Wednesday, February 25

Lecture: Practice of integer exponents (5.3)
Solving systems of linear equations by the addition method (4.3)
Quiz 3
Homework: Problem Sets 8 and 9
Review on your own: Linear Equations (2.1, 2.2, 2.3)
Linear Inequalities (2.7)
Graphing a straight line (3.2)

Class 11 – Monday, March 2

Lecture: Rational Expressions (7.1 – 7.4)
Complex Fractions (7.5)
Extra Credit Assignment: Problem Set 10
Also posted: (for review) Linear Equations 2

Class 12 – Wednesday, March 4

Lecture: Rational Equations (7.6)
Factoring by grouping (6.1)
Factoring by the AC-method (6.4)
Quiz 4 (take home)
Also posted: Exam 2 Information, Review for Exam 2

Class 13 – Monday, March 9

Lecture: Review for Exam 2
Standard labeling (handout)
Area of a triangle (R.3)
The Pythagorean Theorem (6.7)

Class 14 – Wednesday, March 11
Exam 2**Class 15 – Monday, March 16**

Lecture: The Pythagorean Theorem (6.7, handout)
Completing the square – Part 3 (handout)

Class 16 – Wednesday, March 18

Lecture: Writing Equations of Straight Lines (handout, 3.3, 3.4, 3.5)
Homework: Problem Sets 11 and 12

Class 17 – Monday, March 23

Lecture: Basic Percent Problems (handout)
Absolute Value Equations (10.3)

Class 18 – Wednesday, March 25

Lecture: How to multiply a graph by -1 (8.3, 12.4)
How to take the absolute value of a graph (8.3)
Homework: Problem Set 13
Also posted: Complex Fractions

Class 19 – Monday, March 30

Lecture: Factoring criteria for quadratic expressions

Class 20 – Wednesday, Apr 1

Lecture: Complex Numbers (11.8)
Also posted: Exam 3 Information, Exam 3 Review (Solutions included)
Word Problems 1 and 2

Class 21 – Monday, April 13

Lecture: Review for Exam 3
Complex Numbers (11.8)

Class 22 – Wednesday, Apr 15

Exam 3

Class 23 – Monday, April 20

Lecture: Complex Numbers (11.8, handout)
Mixture Problems (4.4)

Class 24 – Wednesday, Apr 22

Lecture: Mixture Problems (4.4, handout)
Compound inequalities (10.1)

Class 25 – Monday, April 27

Lecture: Rational Exponents (11.2)
Motion Problems (2.4, 4.4, handout)

Class 26 – Wednesday, Apr 29

Lecture: The quadratic formula (12.2, handout)
Also posted: Exam 4 Information, Exam 4 Reviews – Versions A and B (Solutions included)

Class 27 – Monday, May 4

Lecture: Radical Equations (11.7, handout)
Also posted: Final Review – Version C

Class 28 – Wednesday, May 6

Lecture: Similar Triangles (7.7, handout)

Class 29 – Monday, May 11

Lecture: Decimals and Fractions (handout)
Review for the final exam

Class 30 – Wednesday, May 13

Final Exam (same as Exam 4)