

# Math 902 Course Topics

*Prealgebra (5th ed.)*

by Bittinger, Ellenbogen & Johnson (Addison Wesley, 2008)

- Categories:
1. Must be covered in detail.
  2. Must be covered at least briefly.
  3. Do not cover unless you have extra time after adequately doing 1 & 2.

|           |   |     |                                                             |
|-----------|---|-----|-------------------------------------------------------------|
| By week 1 | 1 | 1.1 | Standard Notation                                           |
|           | 1 | 1.2 | Addition                                                    |
|           | 1 | 1.3 | Subtraction                                                 |
| By week 2 | 1 | 1.4 | Rounding and Estimating; Order                              |
|           | 1 | 1.5 | Multiplication and Area                                     |
|           | 1 | 1.6 | Division                                                    |
|           | 1 | 1.7 | Solving Equations                                           |
|           | 1 | 1.8 | Applications and Problem Solving                            |
| By week 3 | 1 | 1.9 | Exponential Notation and Order of Operations                |
|           | 1 | 2.1 | Integers and the Number Line                                |
|           | 1 | 2.2 | Addition of Integers                                        |
|           | 1 | 2.3 | Subtraction of Integers                                     |
|           | 1 | 2.4 | Multiplication of Integers                                  |
| By week 4 | 1 | 2.5 | Division of Integers                                        |
|           | 1 | 2.6 | Introduction to Algebra and Expressions                     |
|           | 1 | 2.7 | Like Terms and Perimeter                                    |
|           | 1 | 2.8 | Solving Equations                                           |
| By week 5 | 1 | 3.1 | Multiples and Divisibility                                  |
|           | 1 | 3.2 | Factorizations                                              |
|           | 1 | 3.3 | Fractions and Fractions Notation                            |
|           | 1 | 3.4 | Multiplication of Fractions                                 |
| By week 6 | 1 | 3.5 | Simplifying                                                 |
|           | 1 | 3.6 | Multiplying, Simplifying, and More with Area                |
|           | 1 | 3.7 | Reciprocals and Division                                    |
|           | 1 | 3.8 | Solving Equations: The Multiplication Principle             |
| By week 7 | 1 | 4.1 | Least Common Multiples                                      |
|           | 1 | 4.2 | Addition, Order and Applications                            |
|           | 1 | 4.3 | Subtraction, Equations, and Applications                    |
|           | 1 | 4.4 | Solving Equations: Using the Principles Together            |
| By week 8 | 1 | 4.5 | Mixed Numerals                                              |
|           | 1 | 4.6 | Addition and Subtraction of Mixed Numerals; Applications    |
|           | 1 | 4.7 | Multiplication and Division of Mixed Numerals; Applications |
|           | 1 | 5.1 | Decimal Notation                                            |
| By week 9 | 1 | 5.2 | Addition and Subtraction with Decimals                      |
|           | 1 | 5.3 | Multiplication with Decimals                                |
|           | 1 | 5.4 | Division with Decimals                                      |
|           | 2 | 5.5 | More with Fractional Notation and Decimal Notation          |

|                                                  |   |      |                                                       |
|--------------------------------------------------|---|------|-------------------------------------------------------|
| By week 10                                       | 2 | 5.6  | Estimating                                            |
|                                                  | 1 | 5.7  | Solving Equations                                     |
|                                                  | 1 | 5.8  | Applications and Problem Solving                      |
|                                                  | 2 | 6.1  | Tables and Pictographs                                |
| By week 11                                       | 2 | 6.2  | Bar Graphs and Line Graphs                            |
|                                                  | 2 | 6.3  | Ordered Pairs and Equations in Two Variables          |
|                                                  | 2 | 6.4  | Graphing Linear Equations                             |
|                                                  | 3 | 6.5  | Means, Medians, and Modes                             |
|                                                  | 3 | 6.6  | Predictions and Probability                           |
| By week 12                                       | 1 | 7.1  | Introduction to Ratios                                |
|                                                  | 1 | 7.2  | Rates and Unit Prices                                 |
|                                                  | 1 | 7.3  | Proportions                                           |
|                                                  | 1 | 7.4  | Applications of Proportions                           |
| By week 13                                       | 2 | 7.5  | Geometric Applications                                |
|                                                  | 1 | 8.1  | Percent Notation                                      |
|                                                  | 1 | 8.2  | Solving Percent Problems Using Percent Equations      |
|                                                  | 1 | 8.3  | Solving Percent Problems Using Proportions            |
|                                                  | 1 | 8.4  | Applications of Percent                               |
| By week 14                                       | 2 | 8.5  | Sales Tax, Commission, and Discount                   |
|                                                  | 2 | 8.6  | Simple and Compound Interest                          |
|                                                  | 3 | 8.7  | Interest Rates on Credit Cards and Loans              |
|                                                  | 2 | 9.1  | Systems of Linear Measurement                         |
|                                                  | 2 | 9.2  | Converting Units of Area                              |
|                                                  | 2 | 9.3  | More with Perimeter and Area                          |
| Skip unless you have time. First cover 10.1-10.4 | 3 | 9.4  | Volume and Capacity                                   |
|                                                  | 3 | 9.5  | Angles and Triangles                                  |
|                                                  | 3 | 9.6  | Square Roots and the Pythagorean Theorem              |
|                                                  | 3 | 9.7  | Weight, Mass, and Temperature                         |
|                                                  | 3 | 9.8  | Medical Applications                                  |
| By week 15                                       | 2 | 10.1 | Addition and Subtraction of Polynomials               |
|                                                  | 2 | 10.2 | Introduction to Multiplying and Factoring Polynomials |
|                                                  | 2 | 10.3 | More Multiplication of Polynomials                    |
|                                                  | 2 | 10.4 | Integers as Exponents                                 |
|                                                  | 3 | 10.5 | Scientific Notation                                   |