

NAME \_\_\_\_\_

ALGEBRA 2

DATE \_\_\_\_\_

MR. TURICK

## Algebra II Mid-term Exam Review Sheet

**Use this sheet as a study guide. If you know each of the topics listed, you should be ready for the exam. The format of the exam will be similar to our regular class tests, but it covers A LOT of material --you must STUDY!**

**GOOD LUCK!**

Exam Date: Thursday January 21, 2010 at 8:00 AM

Review Day/AMS: We will review in class on Thursday January 14<sup>th</sup> and Friday January 15<sup>th</sup>. I will be available after school the week of and the week before the exam. Please feel free to come see me with questions.

Review Session: Wednesday January 20, 2010 at 11:30 AM

### Chapter 1

- PEMDAS
- Properties of Real Numbers (commutative, distributive, etc.)
- Sets of Real Numbers (Real, Rational, Irrational, etc.)
- Properties of Equality (Reflexive, Symmetric, etc.)
- Solving equations
- Solving for a given variable
- Absolute value equations
- Solving Inequalities
- Absolute Value Inequalities
- Combining like terms
- Inverses
- Mean, Median, Mode

## **Chapter 2**

- Domain/Range
- Function vs. relation
- Using function notation
- Determining whether a function is linear
- Slope-intercept form of a linear equation
- Point-slope form of a linear equation
- Parallel vs. perpendicular lines
- Graphing linear equations
- X and y intercepts
- Slope
- Writing linear equations given information (eg: slope, intercepts etc..)
- Vertical line test
- Mapping
- Graph linear inequalities and shade appropriately
- Scatter plots
- Line of best fit
- Correlation

## **Chapter 3**

- 3 different types of systems
- Solve systems by graphing (find intersection point)
- Solve systems algebraically (elimination or substitution)
- Solving systems of inequalities (shading)
- Systems word problems

## **Chapter 5:**

- Rules of exponents
- Monomials
- Adding/Subtracting Polynomials
- Is it a polynomial?
- Multiplying Polynomials, FOIL
- Dividing Polynomials by a Monomial
- Dividing Polynomials by a Binomial
- Synthetic Division
- Factoring
  - ✓ GCF
  - ✓ Difference of 2 Squares
  - ✓ Trinomials (Easy, Hard, PST)

## **Vocabulary:**

- Formula
- Algebraic expression
- Open sentence
- Equation
- Solution
- Variable
- Absolute value
- Function
- Relation
- Linear Equation
- Slope
- X and y intercept
- Domain
- Range
- Scatter plot
- Independent/Dependent Variable
- Line of Best Fit
- Exponent
- Degree
- Constant
- Coefficient
- Power
- Monomial
- Binomial
- Trinomial
- Polynomial
- FOIL
- Root
- Index
- Radicand
- Conjugate

## Helpful studying and test-taking hints...

- ✓ Identify each term, operation, and topic on this sheet
- ✓ Do all the problems at home and have your answers completed when you come to class. This way, when we go over the questions in class you will already know what you need to ask about.
- ✓ Take advantage of AMS and study sessions
- ✓ Consolidate your notes. Take your math notes, and re-write them using only the highlights of the chapter. This approach will help you in two ways:
  1. You will refresh all the topics by re-writing them
  2. You will have a succinct document to use both in class and at home while studying
- ✓ Don't hurry through the exam. Take your time and check your answers.
- ✓ Do practice problems that you already have the answers to. Do the problems without looking at the answers and then check them when you are done. This way, you will know if you are correct.
- ✓ You **MUST** study the night before! There is so much material on this exam. You can't assume that you already know it. There are things that you may have forgotten. You **MUST** review them.
- ✓ Pay attention to details. While taking the test, watch your operations. Try not to make careless mistakes. Watch your signs and pay attention to positives and negatives.
- ✓ Make sure your answers are **REASONABLE** and you have **ANSWERED THE QUESTION THAT WAS ASKED.**
- ✓ Don't panic! This is a **BIG** one! When you sit to take the exam, start with a problem you know how to do. Even if you have to skip ahead, always start with a question you are certain about. This will calm you down so you can go back to the other problems. **RELAX** and **THINK**.
- ✓ Do your best. Walk out of the exam knowing that you studied and did the best you could.