

MATH 23 DISTANCE LEARNING
FINAL EXAM REVIEW

Review your old exams and the following problems from your homework.

Properties Real Numbers & Algebraic Expressions

- Be able to evaluate expressions containing absolute values and exponents. Review pg.87 # 25-30.
- Add, subtract, multiply, or divide fractions. Review pg. 34 #49 and pg. 43 #21,39
- Use the order of operations and rules for operations with integers to evaluate expressions. Review pg. 176 #13,17,25
- Identify properties of real numbers. Review pg. 122 #1, pg. 123 # 7,9,11,13
- Simplify algebraic expressions. Review. pg. 142 # 37,49.
- Evaluate algebraic expressions given values for the variables. Review pg. 142 # 53

Linear Equations and Inequalities in One Variable

- Solve linear equations, including those that contain fractions. Review pg. 210 # 25,39, pg. 217 #19, pg. 225 # 29,33,41.
- Be able to set up linear equations to solve number and geometry word problems (you do not need to do "age problems. Review pg. 257 #9,20,29.
- Solve one-variable linear inequalities and compound inequalities and be able to graph the solutions on the number line. Review pg.237 #37,39,45 (these problems contain fractions. To make solving easier, multiply each part of the inequality by the common denominator first).
- Use an inequality to solve a word problem involving "averages". Review pg. 238 # 51

Cartesian Coordinate System

- Plot points, find the coordinates of a point and determine the quadrant in which a point lies. Review pg. 311 # 5,15,27.
- Use the Pythagorean Theorem (or the distance formula) to find the distance between two points indicated on a coordinate system. Review pg. 752 # 17.

Linear Equations and Inequalities in Two Variables

- Determine whether and ordered pair represents a solution to a linear equation. Review pg. 313 # 27.
- Graph a line given its equation. Review pg. 331 # 23,37,39
- Know the formula for slope and be able to find the slope between two points. Review pg. 347 #11,15
- Find the x - and y - intercepts of a line given its equation (Then use the intercepts to graph the line). Review pg. 331 # 53,61.
- Graph a line given its slope and a point on the line. Review pg # 347 # 25, 47 Pg # 358 # 31,35.
- Know the following three formulas for lines:
Standard form: $Ax + By = C$
Point-Slope form: $y - y_1 = m(x - x_1)$ Used to find the equation of a line given the slope and a point.
slope-intercept form: $y = mx + b$ Most useful form for graphing.
You need to memorize these formulas, and know how to change from one form to the other. Know what each letter stands for in the formulas. Be able to graph an equation given in any of these forms. Review: pg. 388 # 17,19,43,46,49
- Find equations of lines that are parallel or perpendicular to those given. Review pg 359 # 37,39
- Be able to find the equation of a line given two points. Pg. 358# 17,23
- Graph two variable inequalities. Review pg. 381 # 13,19

Systems of Linear Equations in Two Variables

- Solve a system of two linear equations by graphing, substitution, or elimination. Review pg. 411 # 13,19; pg. 418 # 19,23; pg. 426 # 5,23
- Solve a word problems using a system of equations (to get full credit on the test, you will be required to use a system of equations). Review **number problems:** pg. 435 #3; **money problems:** pg. 436 # 18,19; **interest problems:** pg. 446 # 5,9,13; **mixture problems:** pg. 447 #15,19,21.

Exponents, Polynomials & Factoring

- Simplify expressions using the laws of exponents. Review page 478 #7,17,23,41,59,75,79; page 491 # 13,23,29
- Be able to convert numbers to and from scientific notation. Review page 492 # 49,55,61
- Add and subtract polynomials. Review page 505 # 7,1, 21,29,47.
- Multiply polynomials. Review page 512 #7,17,19,21,49,55. page 520 #13, 29, 41,53
- Divide polynomials. Review page 532 # 5,13,23,37
- Factor polynomials by finding the GCF, by grouping, and by using formulas for the difference of squares. Review Pg. 556 #39,47;61,71,77; pg. 563 # 27,31,37,47; pg. 575 #1,5,17,41,59; pg. 583 # 1,13,31,41

Radicals

- Simplify square roots and cube roots. Review pg. 718 # 9,23,35,43,57

- Perform operations on radicals. Review pg. 723 #5,21,29,43,51,63
- Rationalize Denominators. Review pg . 730 # 9, 39
- Solve radical equations. Review pg. 736 # 11,31.

Quadratic Equations

- Solve quadratic equations by factoring or by the quadratic formula. Review pg. 592 # 11,21,29,37; pg. 794 # 11,23.
- Solve application problems involving quadratic equations. Pg.597 # 21,31