

Final Review

Topics

- Finding the next number in a pattern
- Counterexamples
- Rounding
- Problem solving
- Unions, intersections, and complements.
- Venn diagrams.
- $\subset, \cap, \cup, ', \emptyset, U$
- Survey problems
- Writing Hindu-Arabic numerals in expanded form
- Converting from base b to base 10
- Roman numerals
- Prime factorization, greatest common divisor, least common multiple
- Inequalities
- Absolute value
- Adding/subtracting/multiplying/dividing integers
- Order of operations
- Reducing/adding/subtracting/multiplying/dividing fractions
- Mixed numbers, improper fractions
- Adding/subtracting/multiplying/dividing square roots, rationalizing denominators
- Scientific notation
- Arithmetic and geometric sequences
- Evaluating and simplifying algebraic expressions
- Solving linear equations
- Solving proportions
- Solving linear inequalities and graphing the solution on the number line
- FOILing binomials, factoring trinomials, quadratic formula
- Exponents
- Distributive property
- Plotting ordered pairs
- Evaluating functions
- Vertical Line Test
- Graphing lines
- Slope
- Determining whether a parabola opens up or down & whether it has a max or min
- Using the vertex to determine the maximum or minimum of a quadratic function
- Finding the intercepts & vertex of a parabola
- Graphing parabolas
- Finding the value of e & π on your calculator
- Graphing exponential functions
- Solving systems of equations by graphing, substitution, & addition
- Finding where two lines intersect
- Graphing systems of linear inequalities
- Modular arithmetic

Memorize:

- Roman numerals
- Slope-intercept form of a line: $y = mx + b$
- Slope of the line between two points: $m = \frac{y_2 - y_1}{x_2 - x_1}$
- Vertex of a parabola: $x = \frac{-b}{2a}$
- Quadratic formula: $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

Extra credit review problems (20 points, due when you take the test)

- Give the values of e and π rounded to the nearest one, tenth, hundredth, and thousandth
- 1.1: 7,12,13,28
- 1.2: 51
- 1.3: 11,18
- 2.2: 6,29,40
- 2.3: 2,3,8,9,15,63,65,66
- 2.4: 28,29,32
- 2.5: 30
- 4.1: 12,17,21
- 4.2: 10,15,41,42
- 4.4: 20,22,23
- 5.1: 30,35,47,52,59,60
- 5.2: 6,7,10,14,15,19,24,32,33,36,41,44,45,56,63,67,70,73,75,82,87,92,95
- 5.3: 3,14,15,58,61,66,67,71,74,78,79,87
- List the perfect squares up to 144
- 5.4: 17,23,30,41,50,59,62
- 5.5: 23,26,27
- 5.6: 1,6,11,14,17,21,22,25,27,30,33,42,52,59,61,66,82,83,88,89
- 5.7: 5,10,49,56,100,105
- 6.1: 2,3,26,27,33,44,63,74,75
- 6.2: 22,38,41,45,46,63,69
- 6.4: 12,13,29,30
- 6.5: 35,40,53,54
- 6.6: 3,8,13,20,34,55,62,75
- 7.1: 8,16,17,35,40,54,55,61
- 7.2: 4,12,13,25,30,37,40,42,45
- 7.3: 2,3,6,7,16,17,19,22,26,29,46
- 7.4: 2,7,12,15
- 7.5: 10,11,15,20,25,30,47,51
- 7.6: 6,13,17,20,25,34
- 13.2: 20,27,33,36,37,62

General Info:

- Bring a calculator to the test. You may not use your cell phone.
- Please do not talk to anyone about the test who hasn't taken it yet, as there are two sections of this class.