ALGEBRA I COMMON CORE REGENTS PREPARATION

Syllabus of Semester Content

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CONTENT AREA	GRADED WEIGHT
CLASS ASSIGNMENTS	40%
HOMEWORK ASSIGNMENTS – GREEN UNIT WORKBOOKS	15%
IXL ONLINE ASSIGNMENTS	15%
END OF MARKING PERIOD TEST	15%
PROFESSIONALISM – Punctuality, behavior & communication	15%
TOTAL WEIGHT	100%

All given quizzes will be bonus points added into your end of marking period test

Below are the following topics we will try to learn and cover throughout the semester in preparation for your New York State Regents examination.

1ST MARKING PERIOD	2ND MARKING PERIOD	3RD MARKING PERIOD
Signed Numbers	Linear functions	Interpreting bar graphs, line graphs and histograms
Fractions	Slope of a graph	Create bar graphs, line graphs and histograms
Numerical Properties	Slope of two points	Mean, median, mode & range
MONOMIALS – Add, Subtract, Multiply And Divide	Slope intercept form – find the slope and y-intercept	Quartiles – lower, median & upper
Variable Expressions & equations	Point slope form – write an equation	Identifying outliers
Exponents	Point slope form – graph an equation	Word problems – mixed review, money, consecutive integers, rate of travel and weighted averages
Absolute Values	Domain & range relations	Word problems – solving linear equations
Substitution of Variables	Identify functions	Word problems – exponential growth and decay
Binomials - Add, Subtract, Multiply and Divide	Complete a function table from a graph	Matching quadratic functions and their graphs
Polynomials - Add, Subtract, Multiply And Divide	Calculating the distance between two points	Number sequences – arithmetic & geometric
Factoring – monomials, binomials, polynomials	Quadratic equations	Slopes of parallel & perpendicular lines
Simplify Radical expressions	Quadratic functions	System of linear inequalities
Solve for radical equations	Exponential functions	Solving system of linear equations
Simplify rational expressions	Absolute value functions	Interpret a scatter plot
Linear Inequalities	Radical functions	Solve for right triangles
Solving proportions	Solving for the square	Geometry – perimeter, area, volume & surface area
Convert between standard and scientific notation	Graphing calculator features	Write and solve direct variation equations

We will try to cover the following exercises below for all three marking periods using the *IXL.COM* online website to reinforce our skills in the following content area:

	IXL – ALGEBRA I ASSIGNMENTS – 1st MARKING PERIOD
1	NUMBERS – Convert between decimals and fractions
2	NUMBERS – square roots
3	NUMBERS – cube roots
4	NUMBERS – Absolute value and opposites
5	OPERATIONS – add, subtract, multiply and divide integers
6	OPERATONS – Evaluate Variable Expressions Involving Integers
7	OPERATIONS – add, subtract, multiply and divide integers
8	OPERATONS – EVALUATE VARIABLE EXPRESSIONS INVOLVING RATIONAL NUMBERS
9	MONOMIALS – MULTIPLY MONOMIALS
10	MONOMIALS – DIVIDE MONOMIALS
11	MONOMIALS – POWERS OF MONOMIALS
12	EXPONENTS – exponents with integer bases
13	EXPONENTS – exponents with decimal and fraction bases
14	EXPONENTS – multiplication with exponents
15	EXPONENTS – division with exponents
16	EXPONENTS –power rule
17	EXPONENTS – Integers raised to rational exponents
18	VARIABLE EXPRESSIONS & EQUATIONS – write variable expressions
19	VARIABLE EXPRESSIONS & EQUATIONS – simplify variable expressions involving like terms
20	VARIABLE EXPRESSIONS & EQUATIONS – identify linear expressions
21	VARIABLE EXPRESSIONS & EQUATIONS – write variable equations
22	VARIABLE EXPRESSIONS & EQUATIONS – which X satisfies an equation
23	VARIABLE EXPRESSIONS & EQUATIONS – solve equations using order of operations
24	VARIABLE EXPRESSIONS & EQUATIONS – rearrange multi-variable equations
25	SOLVE EQUATIONS – solve one-step linear equations
26	SOLVE EQUATIONS - solve two-step linear equations
27	SOLVE EQUATIONS – solve advanced linear equations
28	SOLVE EQUATIONS – solve equations with variables on both sides
29	SOLVE EQUATIONS – solve linear equations word problems
30	SOLVE EQUATIONS – solve linear equations mixed review
31	RADICAL EXPRESSIONS: Simplify radical expressions
32	RADICAL EXPRESSIONS: Simplify radical expressions with fractions
33	RADICAL EXPRESSIONS: Multiply radical expressions
34	RADICAL EXPRESSIONS: Add and subtract radical expressions
35	RADICAL EXPRESSIONS: divide radical expressions

	IXL – ALGEBRA I ASSIGNMENTS – 2nd MARKING PERIOD
1	RELATIONS & FUNCTIONS: Complete a function table from a graph
2	RELATIONS & FUNCTIONS: Complete a function table from an equation
3	RELATIONS & FUNCTIONS: Evaluate a function
4	RELATIONS & FUNCTIONS: Domain and range of relations
5	RELATIONS & FUNCTIONS: Identify functions
6	LINEAR FUNCTIONS: Identify linear functions
7	LINEAR FUNCTIONS: Find the slope of a graph
8	LINEAR FUNCTIONS: Find the slope from two points

9	LINEAR FUNCTIONS: Find the missing coordinate using slope
10	LINEAR FUNCTIONS: Write an equation
11	LINEAR FUNCTIONS: Write an equation from a table
12	LINEAR FUNCTIONS: Linear equations – solve for Y
13	QUADRATIC EQUATIONS: Complete the square
14	QUADRATIC EQUATIONS: Complete a function table of quadratic functions
15	QUADRATIC EQUATIONS: Solve a quadratic equation using square roots
16	QUADRATIC EQUATIONS: Solve a quadratic equation using the zero product property
17	QUADRATIC EQUATIONS: Solve a quadratic equation using the quadratic formula
18	FUNCTIONS: LINEAR, QUADRATIC & EXPONENTIAL – identify linear, quadratic and exponential functions from graphs
19	ABSOLUTE VALUE FUNCTIONS: Complete a function table of absolute value functions
20	ABSOLUTE VALUE FUNCTIONS: graph an absolute value function
21	ABSOLUTE VALUE FUNCTIONS: Domain and range of absolute value functions
22	RADICAL FUNCTIONS & EQUATIONS: Evaluate a radical function
23	RADICAL FUNCTIONS & EQUATIONS: Solve radical equations I
24	RADICAL FUNCTIONS & EQUATIONS: Solve radical equations II
25	EXPONENTIAL FUNCTIONS: Evaluate an exponential function
26	EXPONENTIAL FUNCTIONS: Match exponential functions and graphs
27	EXPONENTIAL FUNCTIONS: Domain and range of exponential functions - equations
28	SINGLE-VARIABLE INEQUALITIES: Solve one-step linear inequalities
29	SINGLE-VARIABLE INEQUALITIES: Solve two-step linear inequalities
30	SINGLE-VARIABLE INEQUALITIES: Solve advanced linear inequalities
31	SINGLE-VARIABLE INEQUALITIES: Write compound inequalities from graphs
32	SINGLE-VARIABLE INEQUALITIES: Solve compound inequalities

	IXL – ALGEBRA I ASSIGNMENTS – 3rd MARKING PERIOD
1	STATISTICS: Mean, median, mode and range
2	STATISTICS: Quartiles
3	STATISTICS: Identify an outlier
4	STATISTICS: Interpret a scatter plot
5	DATA & GRAPHS: Interpret bar graphs, line graphs and histograms
6	DATA & GRAPHS: Create bar graphs, line graphs and histograms
7	DATA & GRAPHS: Interpret box and whisker plots
8	PROBLEM SOLVING: word problems mixed review
9	PROBLEM SOLVING: word problems with money
10	PROBLEM SOLVING: consecutive integer problems
11	PROBLEM SOLVING: rate of travel word problems
12	PROBLEM SOLVING: weighted averages word problems
13	SYSTEMS OF LINEAR EQUATIONS: Is X,Y a solution to the system of equations
14	SYSTEMS OF LINEAR EQUATIONS: Solve a system of equations by substituting
15	SYSTEMS OF LINEAR EQUATIONS: Solve a system of equations using elimination
16	GEOMETRY: Perimeter
17	GEOMETRY: Area
18	GEOMETRY: Volume
19	GEOMETRY: Surface area
20	GEOMETRY: Pythagorean Theorem