Algebra 1
Summer IXL Extra Credit Opportunity:

Hello Wonderful Algebra 1 students,

I hope you are having a great start to summer! You will have a special opportunity to get extra credit over the summer. **This summer work will allow you to replace your lowest test score of the 1st Quarter with up to a 100%.**

Typically, students are given a packet of math pages to complete over the summer, and just as typically, many will either hurriedly work through the pages to complete them (getting them DONE), or wait until the end of summer and rush to finish the pages before school starts. Neither of these scenarios is helpful, so this summer the math department is using IXL. The goal is not to "ruin" your summer vacation; instead the goal is to keep your working knowledge of mathematical skills fresh.

Here is the list of the math skills all incoming Algebra 1 students should review over the summer. Each student may choose up to 100 of the sections below to a **score of 75** by working 15-20 minutes per day over the summer vacation. Please do not try to finish all the assignments at the beginning of summer just to, "Get them done." Instead, build the habit of 15-20 minutes per day. This will keep your mind mathematically engaged through the summer and will enable you to start the new year "running!" The Algebra 1 book requires that you have a mastery of Pre-Algebra skills in order to be truly ready and able to achieve real success for the next school year. The 15-20 minutes per day should not be burdensome and reaching a **score of 75** in each section is not too difficult. The 15-20 minutes you spend each day will keep you primed and ready to tackle next year's adventure in mathematics!

Have a wonderful summer! Please email me: stmcdowell@cvcs.org if you have questions regarding the extra credit assignment.

In addition, it would be very helpful for all Algebra 1 students to purchase the book over the summer so you can bring your book and be prepared on the first day of school. The book on Amazon (used) is more reasonable now typically than at the start of the school year when so many students are trying to buy it. Here is what you need: **Algebra 1 Common Core, Pearson 2015; ISBN #: 978-0-13-328114-9**

Mrs. McDowell

Here are all the sections of IXL for Algebra 1 (you will be completing the **8th grade math** sections instead of the Alg 1 sections because you have not yet been taught Alg 1). You may choose up to 100 sections *to a score of 75* **from the given list below**. If you complete 100 sections to a score of 75, then you can replace your lowest test score of the 1st quarter with a 100%. If you complete 85 of the sections to a score of 75, then you can replace your lowest test score with an 85% and so on.

Log on to the website: www.ixl.com/signin/cvcs. Then put in your username and password and begin the extra credit opportunity by clicking on the icon "Math" at the top of the page and then selecting "**8th grade math**". Once you click on 8th grade math, you will see the following sections to complete-Choose only the sections I have listed below in blue! Any other sections will not earn extra credit! I will be able to see your progress throughout the summer. *This is summer work and must be completed by the first day of school in order to receive the extra credit.*

Sometimes IXL changes the section numbers around, **so follow the section title** if for some reason the number and the title do not match up. Remember, you only need to complete each section to a **score of 75**.

Username:

Password:

If you are having trouble logging onto your IXL account:

1) Please try the web address of: www.ixl.com/signin/cvcs with the username and password given to you OR
2) You may also go to www.ixl.com and put in your username for example: jdoe@cvcs and then your password that was given to you.

Number theory

1. **A.1** Factors
2. **A.2** Divisibility rules
3. **A.3** Prime or composite
4. **A.4** Prime factorization
5. **A.5** Greatest common factor
6. **A.6** Least common multiple
7. **A.7** GCF and LCM: word problems

Integers

1. **B.1** Integers on number lines
2. **B.3** Absolute value and opposite integers
3. **B.4** Compare and order integers
4. **B.5** Integer inequalities with absolute values

Operations with integers

1. **C.1** Integer addition and subtraction rules
2. **C.3** Add and subtract integers
3. **C.4** Add and subtract three or more integers
4. C.5 Add and subtract integers: word problems
5. **C.6** Integer multiplication and division rules
6. **C.7** Multiply and divide integers
7. **C.8** Evaluate numerical expressions involving integers

Rational numbers

1. **G.1** Write fractions in lowest terms
2. **G.2** Least common denominator
3. **G.3** Round decimals and mixed numbers
4. G.4 Convert between repeating decimals and fractions
5. **G.5** Convert between decimals and fractions or mixed numbers
6. **G.6** Absolute value of rational numbers
7. **G.7** Compare rational numbers

Operations with rational numbers

1. **H.1** Reciprocals and multiplicative inverses
2. **H.2** Add and subtract rational numbers
3. H.3 Add and subtract rational numbers: word problems
4. **H.5** Multiply and divide rational numbers
5. **H.9** Evaluate numerical expressions involving rational numbers

Exponents and roots

1. **D.1** Understanding exponents
2. **D.2** Evaluate exponents
3. **D.3** Solve equations with variable exponents
4. **D.4** Exponents with negative bases
5. **D.5** Exponents with decimals and fractional bases
6. **D.8** Evaluate negative exponents
7. **D.9** Multiplication with exponents
8. **D.10** Division with exponents
9. **D.11** Multiplication and division with exponents
10. **D.12** Power rule
11. **D.13** Evaluate expressions using properties of exponents

12. **D.14** Identify equivalent expressions involving exponents I
13. **D.15** Identify equivalent expressions involving exponents II

Scientific notation
1. **E.1** Convert between standard and scientific notation
2. **E.3** Compare numbers written in scientific notation
3. **E.5** Multiply numbers written in scientific notation
4. **E.6** Divide numbers written in scientific notation

Square roots and cube roots

1. **F.1** Square roots of perfect squares
2. **F.3** Positive and negative square roots
3. **F.5** Relationship between squares and square roots
4. **F.6** Solve equations using square roots
5. **F.7** Cube roots of positive perfect cubes
6. **F.9** Solve equations using cube roots

I. Rational and irrational numbers

1. I.1 Identify rational and irrational square roots
2. I.2 Identify rational and irrational numbers
3. I.3 Classify numbers
4. I.4 Irrational numbers on number lines

Ratios, rates, and proportions
1. **J.1** Understanding ratios
2. **J.2** Identify equivalent ratios
3. **J.3** Write an equivalent ratio
4. **J.5** Unit rates
5. **J.7** Do the ratios form a proportion?
6. **J.9** Solve proportions
7. J.10 Solve proportions: word problems
8. J.12 Scale drawings: word problems

Percents
1. **L.1** Convert between percents, fractions, and decimals
2. **L.3** Find what percent one number is of another
3. **L.4** Find what percent one number is of another: word problems
4. **L.6** Percents of numbers and money amounts
5. **L.9** Solve percent equations
6. **L.10** Percent of change
7. **L.11** Percent of change: word problems

Consumer math
1. **M.5** Percent of a number: tax, discount, and more
2. **M.6** Find the percent: tax, discount, and more
3. **M.10** Simple interest

Coordinate plane

1. **P.1** Coordinate plane review
2. **P.2** Quadrants and axes
3. **P.3** Follow directions on a coordinate plane
4. P.4 Find the distance between two points

Pythagorean theorem

1. **T.1** Pythagorean theorem: find the length of the hypotenuse
2. **T.2** Pythagorean theorem: find the missing leg length
3. T.5 Pythagorean theorem: word problems
4. **T.6** Converse of the Pythagorean theorem: is it a right triangle?

Geometric measurement

1. **V.1** Perimeter
2. **V.2** Area
3. **V.3** Area and perimeter: word problems

Expressions and properties

1. **X.1** Write variable expressions
2. **X.5** Evaluate one-variable expressions
3. **X.6** Evaluate multi-variable expressions
4. **X.7** Evaluate absolute value expressions
5. **X.8** Evaluate radical expressions
6. **X.9** Evaluate rational expressions
7. **X.10** Identify terms and coefficients
8. **X.12** Properties of addition and multiplication
9. **X.13** Multiply using the distributive property
10. **X.14** Write equivalent expressions using properties
11. **X.15** Add and subtract like terms
12. **X.16** Add, subtract, and multiply linear expressions
13. X.18 Identify equivalent linear expressions I

One-variable equations

1. **Y.1** Which x satisfies an equation?
2. **Y.2** Write an equation from words
3. **Y.5** Properties of equality
4. **Y.7** Solve one-step equations
5. **Y.8** Solve two-step equations
6. **Y.9** Solve multi-step equations
7. **Y.10** Solve equations involving like terms

One-variable inequalities

1. **Z.1** Solutions to inequalities
2. **Z.2** Graph inequalities on number lines
3. **Z.3** Write inequalities from number lines
4. **Z.4** Solve one-step inequalities
5. **Z.5** Graph solutions to one-step inequalities
6. **Z.6** Solve two-step inequalities
7. **Z.7** Graph solutions to two-step inequalities

Statistics

1. **FF.1** Calculate mean, median, mode, and range

Probability

1. **GG.1** Probability of simple events
2. GG.2 Experimental probability