

# 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 1<sup>st</sup> 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 (Mr. Sanchez) [gsanchez@cvcs.org](mailto:gsanchez@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**

*Mr. Sanchez*

Here are all the sections of IXL for Algebra 1 (you will be completing the **8<sup>th</sup> 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 1<sup>st</sup> 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](http://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 "**8<sup>th</sup> grade math**". Once you click on 8<sup>th</sup> 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:

Please try to log on to IXL with your username and password to confirm that it works as soon as possible. If you are having trouble with your username and/or password email me before July 8<sup>th</sup>.

## **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.9 Classify numbers](#)

## **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](#)
4. [C.4 Add and subtract three or more integers](#)
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. [D.1 Write fractions in lowest terms](#)
2. [D.2 Least common denominator](#)
3. [D.3 Round decimals and mixed numbers](#)
4. [D.4 Convert between decimals and fractions or mixed numbers](#)
5. [D.6 Absolute value of rational numbers](#)
7. [D.7 Compare rational numbers](#)

## **Operations with rational numbers**

1. [E.1 Reciprocals and multiplicative inverses](#)
2. [E.2 Add and subtract rational numbers](#)
3. [E.5 Multiply and divide rational numbers](#)
5. [E.9 Evaluate numerical expressions involving rational numbers](#)

## **Exponents and roots**

1. [F.1 Understanding exponents](#)
2. [F.2 Evaluate exponents](#)
3. [F.3 Solve equations with variable exponents](#)
4. [F.4 Exponents with negative bases](#)
5. [F.5 Exponents with decimals and fractional bases](#)
6. [F.7 Evaluate negative exponents](#)
7. [F.8 Multiplication with exponents](#)
8. [F.9 Division with exponents](#)

9. [F.10 Multiplication and division with exponents](#)
10. [F.11 Power rule](#)
11. [F.12 Evaluate expressions using properties of exponents](#)
12. [F.13 Identify equivalent expressions involving exponents I](#)
13. [F.14 Identify equivalent expressions involving exponents II](#)
14. [F.15 Square roots of perfect squares](#)
15. [F.17 Positive and negative square roots](#)
16. [F.19 Relationship between squares and square roots](#)
17. [F.20 Solve equations using square roots](#)
18. [F.21 Cube roots of positive perfect cubes](#)
19. [F.23 Solve equations using cube roots](#)

### **Scientific notation**

1. [G.1 Convert between standard and scientific notation](#)
2. [G.2 Compare numbers written in scientific notation](#)
3. [G.4 Multiply numbers written in scientific notation](#)
4. [G.5 Divide numbers written in scientific notation](#)

### **Ratios, rates, and proportions**

1. [H.1 Understanding ratios](#)
2. [H.2 Identify equivalent ratios](#)
3. [H.3 Write an equivalent ratio](#)
4. [H.5 Unit rates](#)
5. [H.8 Do the ratios form a proportion?](#)
6. [H.10 Solve proportions](#)

### **Percents**

1. [J.1 Convert between percents, fractions, and decimals](#)
3. [J.3 Find what percent one number is of another](#)
4. [J.4 Find what percent one number is of another: word problems](#)
5. [J.6 Percents of numbers and money amounts](#)
6. [J.9 Solve percent equations](#)
7. [J.10 Percent of change](#)
8. [J.11 Percent of change: word problems](#)

### **Consumer math**

1. [K.5 Percent of a number: tax, discount, and more](#)
2. [K.6 Find the percent: tax, discount, and more](#)
3. [K.10 Simple interest](#)

### **Coordinate plane**

1. [N.1 Coordinate plane review](#)
2. [N.2 Quadrants and axes](#)
3. [N.3 Follow directions on a coordinate plane](#)

### **Pythagorean theorem**

1. [R.1 Pythagorean theorem: find the length of the hypotenuse](#)
2. [R.2 Pythagorean theorem: find the missing leg length](#)
3. [R.6 Converse of the Pythagorean theorem: is it a right triangle?](#)

## **Geometric measurement**

1. [T.1 Perimeter](#)
2. [T.2 Area](#)
3. [T.3 Area and perimeter: word problems](#)

## **Expressions and properties**

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

## **One-variable equations**

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

## **One-variable inequalities**

1. [X.1 Solutions to inequalities](#)
2. [X.2 Graph inequalities on number lines](#)
3. [X.3 Write inequalities from number lines](#)
4. [X.4 Solve one-step inequalities](#)
5. [X.5 Graph solutions to one-step inequalities](#)
6. [X.6 Solve two-step inequalities](#)
7. [X.7 Graph solutions to two-step inequalities](#)

## **Statistics**

1. [DD.1 Calculate mean, median, mode, and range](#)

## **Probability**

1. [EE.1 Probability of simple events](#)