

Algebra 2

Summer IXL Extra Credit Opportunity:

Hello Wonderful Algebra 2 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 2 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 2 book requires that you have a mastery of Algebra 1 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! I am available via email over the summer except for 6/12-18 and 7/8-16. Please email me stmcdowell@cvcs.org

In addition, it would be very helpful for all Algebra 2 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 very reasonable right now, but the longer you wait to buy it the more expensive it will be. Here is what you need: **Algebra 2 Common Core, Pearson 2015; ISBN #: 978-0-13-328116-3**

Mrs. McDowell

Here are all the sections of IXL for Algebra 2. 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 "**Algebra 1**". Once you click on Algebra 1, you will see the following sections to complete-Choose only the sections I have listed below. 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 8th.

Solve equations

1. [J.4Solve two-step linear equations](#)
2. [J.5Solve advanced linear equations](#)
3. [J.6Solve equations with variables on both sides](#)
4. [J.7Solve equations: complete the solution](#)
5. [J.8Find the number of solutions](#)
6. [J.9Create equations with no solutions or infinitely many solutions](#)
7. [J.10Solve linear equations: word problems](#)
8. [J.11Solve linear equations: mixed review](#)

Single-variable inequalities

1. [K.2Write inequalities from graphs](#)
2. [K.3Identify solutions to inequalities](#)
3. [K.4Solve one-step linear inequalities: addition and subtraction](#)
4. [K.5Solve one-step linear inequalities: multiplication and division](#)
5. [K.6Solve one-step linear inequalities](#)
6. [K.8Solve two-step linear inequalities](#)
7. [K.9Graph solutions to two-step linear inequalities](#)
8. [K.10Solve advanced linear inequalities](#)
9. [K.11Graph solutions to advanced linear inequalities](#)
10. [K.12Graph compound inequalities](#)
11. [K.13Write compound inequalities from graphs](#)
12. [K.14Solve compound inequalities](#)
13. [K.15Graph solutions to compound inequalities](#)

Absolute value equations and inequalities

1. [L.1Solve absolute value equations](#)
2. [L.3Solve absolute value inequalities](#)

Data and graphs

1. [N.1Interpret bar graphs, line graphs, and histograms](#)
2. [N.5Interpret box-and-whisker plots](#)

Relations and functions

1. [Q.2Domain and range of relations](#)
2. [Q.4Identify functions](#)
3. [Q.7Evaluate a function](#)
4. [Q.8Evaluate a function: plug in an expression](#)

Linear functions

1. [S.1 Identify linear functions from graphs and equations](#)
2. [S.3 Find the slope of a graph](#)
3. [S.4 Find the slope from two points](#)
4. [S.5 Find a missing coordinate using slope](#)
5. [S.6 Slope-intercept form: find the slope and y-intercept](#)
6. [S.7 Slope-intercept form: graph an equation](#)
7. [S.8 Slope-intercept form: write an equation from a graph](#)
8. [S.9 Slope-intercept form: write an equation](#)
9. [S.12 Linear equations: solve for y](#)
10. [S.17 Write equations in standard form](#)
11. [S.18 Standard form: find x- and y-intercepts](#)
12. [S.19 Standard form: graph an equation](#)
13. [S.20 Equations of horizontal and vertical lines](#)
14. [S.21 Graph a horizontal or vertical line](#)
15. [S.22 Point-slope form: graph an equation](#)
16. [S.23 Point-slope form: write an equation](#)
17. [S.25 Slopes of parallel and perpendicular lines](#)
18. [S.26 Write an equation for a parallel or perpendicular line](#)

Linear inequalities

1. [T.2 Linear inequalities: solve for y](#)
2. [T.3 Graph a two-variable linear inequality](#)
3. [T.5 Is \$\(x, y\)\$ a solution to the system of inequalities?](#)
4. [T.6 Solve systems of linear inequalities by graphing](#)

Systems of linear equations

1. [U.1 Is \$\(x, y\)\$ a solution to the system of equations?](#)
2. [U.2 Solve a system of equations by graphing](#)
3. [U.5 Find the number of solutions to a system of equations](#)
4. [U.8 Solve a system of equations using substitution](#)
5. [U.10 Solve a system of equations using elimination](#)

Exponents

1. [V.1 Exponents with integer bases](#)
2. [V.2 Exponents with decimal and fractional bases](#)
3. [V.3 Negative exponents](#)

4. [V.4 Multiplication with exponents](#)
5. [V.5 Division with exponents](#)
6. [V.6 Multiplication and division with exponents](#)
7. [V.7 Power rule](#)
8. [V.8 Evaluate expressions using properties of exponents](#)
9. [V.9 Identify equivalent expressions involving exponents I](#)
10. [V.11 Evaluate integers raised to rational exponents](#)

Exponential functions

1. [X.1 Evaluate an exponential function](#)
2. [X.2 Match exponential functions and graphs](#)
3. [X.3 Domain and range of exponential functions: graphs](#)

Monomials

1. [Y.1 Identify monomials](#)
2. [Y.2 Multiply monomials](#)
3. [Y.3 Divide monomials](#)
4. [Y.4 Multiply and divide monomials](#)
5. [Y.5 Powers of monomials](#)

Polynomials

1. [Z.1 Polynomial vocabulary](#)
2. [Z.4 Add and subtract polynomials](#)
3. [Z.6 Multiply a polynomial by a monomial](#)
4. [Z.8 Multiply two binomials](#)
5. [Z.9 Multiply two binomials: special cases](#)
6. [Z.10 Multiply polynomials](#)

Factoring

1. [AA.1 GCF of monomials](#)
2. [AA.2 Factor out a monomial](#)
3. [AA.4 Factor quadratics with leading coefficient 1](#)
4. [AA.5 Factor quadratics with other leading coefficients](#)
5. [AA.6 Factor quadratics: special cases](#)
6. [AA.7 Factor by grouping](#)
7. [AA.8 Factor polynomials](#)

Quadratic equations

1. [BB.1 Characteristics of quadratic functions: graphs](#)
2. [BB.6 Solve a quadratic equation using square roots](#)

3. [BB.7 Solve a quadratic equation using the zero product property](#)
4. [BB.8 Solve a quadratic equation by factoring](#)
5. [BB.9 Complete the square](#)
6. [BB.10 Solve a quadratic equation by completing the square](#)
7. [BB.11 Solve a quadratic equation using the quadratic formula](#)
8. [BB.12 Using the discriminant](#)

Radical expressions

1. [EE.1Simplify radical expressions](#)
2. [EE.2Simplify radical expressions with variables](#)
3. [EE.3Simplify radical expressions involving fractions](#)
4. [EE.4Multiply radical expressions](#)
5. [EE.5Add and subtract radical expressions](#)
6. [EE.6Simplify radical expressions using the distributive property](#)
7. [EE.7Divide radical expressions](#)
8. [EE.8Simplify radical expressions: mixed review](#)

Radical functions and equations

1. [FF.4Solve radical equations I](#)

Rational functions and expressions

1. [GG.2Simplify complex fractions](#)
2. [GG.3Simplify rational expressions](#)
3. [GG.4Multiply and divide rational expressions](#)
4. [GG.5Divide polynomials by monomials](#)
5. [GG.7 Add and subtract rational expressions](#)
6. [GG.8 Solve rational equations](#)
7. [GG.9 Evaluate rational expressions](#)

Probability

1. [JJ.1 Theoretical probability](#)
2. [JJ.2 Experimental probability](#)
3. [JJ.8 Counting principle](#)
4. [JJ.10 Permutation and combination notation](#)

Statistics

- [KK.2 Mean, median, mode, and range](#)