

Intermediate (pt. 2) Algebra 2 Summer IXL Extra Credit Opportunity:

Hello Wonderful Intermediate (pt. 2) 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 Intermediate (pt. 2) 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 2nd half of the Algebra 2 book requires that you have a mastery of the skills you learned the first half of the book 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

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 2**". Once you click on Algebra 2, 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 8th.

Variable expressions

[A.1 Evaluate variable expressions involving integers](#)

[A.2 Evaluate variable expressions involving rational numbers](#)

[A.3 Simplify variable expressions using properties](#)

Equations

[B.1 Solve linear equations](#)

[B.2 Solve linear equations: word problems](#)

[B.4 Solve absolute value equations](#)

[B.5 Graph solutions to absolute value equations](#)

[B.6 Solve multi-variable equations](#)

Inequalities

[C.1 Graph a linear inequality in one variable](#)

[C.2 Write inequalities from graphs](#)

[C.3 Write a linear inequality: word problems](#)

[C.4 Solve linear inequalities](#)

[C.5 Graph solutions to linear inequalities](#)

[C.6 Solve absolute value inequalities](#)

[C.7 Graph solutions to absolute value inequalities](#)

[C.8 Graph a two-variable linear inequality](#)

[C.9 Graph solutions to two-variable absolute value inequalities](#)

Functions

[D.1 Domain and range](#)

[D.2 Identify functions](#)

[D.3 Evaluate functions](#)

[D.6 Find the slope of a linear function](#)

[D.7 Graph a linear function](#)

[D.8 Write the equation of a linear function](#)

Systems of equations

[E.1 Is \$\(x, y\)\$ a solution to the system of equations?](#)

[E.2 Solve a system of equations by graphing](#)

[E.5 Classify a system of equations](#)

[E.6 Solve a system of equations using substitution](#)

[E.8 Solve a system of equations using elimination](#)

[E.12 Solve a system of equations in three variables using substitution](#)

[E.13 Solve a system of equations in three variables using elimination](#)

Systems of inequalities

[F.1 Is \$\(x, y\)\$ a solution to the system of inequalities?](#)

[F.2 Solve systems of linear inequalities by graphing](#)

[F.3 Solve systems of linear and absolute value inequalities by graphing](#)

[F.4 Find the vertices of a solution set](#)

[F.5 Linear programming](#)

Complex numbers

[I.1 Introduction to complex numbers](#)

[I.2 Add and subtract complex numbers](#)

[I.3 Complex conjugates](#)

[I.4 Multiply complex numbers](#)

[I.5 Divide complex numbers](#)

[I.6 Add, subtract, multiply, and divide complex numbers](#)

[I.7 Absolute values of complex numbers](#)

[I.8 Powers of \$i\$](#)

Factoring

[J.1 Factor out a monomial](#)

[J.3 Factor quadratics](#)

[J.5 Factor by grouping](#)

[J.6 Factor sums and differences of cubes](#)

Quadratic functions

[K.1 Characteristics of quadratic functions: graphs](#)

[K.2 Characteristics of quadratic functions: equations](#)

[K.5 Graph a quadratic function](#)

[K.6 Solve a quadratic equation using square roots](#)

[K.7 Solve a quadratic equation using the zero product property](#)

[K.8 Solve a quadratic equation by factoring](#)

[K.9 Complete the square](#)

[K.10 Solve a quadratic equation by completing the square](#)

[K.11 Solve a quadratic equation using the quadratic formula](#)

[K.12 Using the discriminant](#)

[K.13 Match quadratic functions and graphs](#)

[K.14 Write a quadratic function from its zeros](#)

Polynomials

[L.1 Polynomial vocabulary](#)

[L.2 Add and subtract polynomials](#)

[L.3 Multiply polynomials](#)

[L.4 Divide polynomials using long division](#)

[L.5 Divide polynomials using synthetic division](#)

[L.6 Evaluate polynomials using synthetic division](#)

[L.7 Solve polynomial equations](#)

[L.8 Find the roots of factored polynomials](#)

[L.9 Write a polynomial from its roots](#)

[L.10 Rational root theorem](#)

[L.11 Complex conjugate theorem](#)

[L.12 Conjugate root theorems](#)

[L.13 Descartes' Rule of Signs](#)

[L.14 Match polynomials and graphs](#)

[L.15 Domain and Range of polynomials](#)

[L.16 Fundamental Theorem of Algebra](#)

[L.17 Pascal's triangle](#)

[L.18 Pascal's triangle and the Binomial Theorem](#)

[L.19 Binomial Theorem I](#)

[L.20 Binomial Theorem II](#)

Radical functions and expressions

[M.1 Roots of integers](#)

[M.2 Roots of rational numbers](#)

[M.4 Simplify radical expressions with variables I](#)

[M.5 Simplify radical expressions with variables II](#)

[M.7 Multiply radical expressions](#)

[M.8 Divide radical expressions](#)

[M.9 Add and subtract radical expressions](#)

[M.10 Simplify radical expressions using the distributive property](#)

[M.11 Simplify radical expressions using conjugates](#)

[M.12 Domain and range of radical functions](#)

[M.13 Solve radical equations](#)

Function operations

[P.1 Add and subtract functions](#)

[P.2 Multiply functions](#)

[P.3 Divide functions](#)

[P.4 Composition of linear functions: find a value](#)

[P.5 Composition of linear functions: find an equation](#)

[P.6 Composition of linear and quadratic functions: find a value](#)

[P.7 Composition of linear and quadratic functions: find an equation](#)

[P.8 Identify inverse functions](#)

Families of functions

[Q.1 Function transformation rules](#)

[Q.2 Translations of functions](#)

[Q.3 Reflections of functions](#)

[Q.4 Dilations of functions](#)

[Q.5 Transformations of functions](#)

[Q.6 Describe function transformations](#)

Variation

[R.1 Write and solve direct variation equations](#)

[R.2 Write and solve inverse variation equations](#)

[R.3 Classify Variation](#)

[R.4 Write joint and combined variation equations 1](#)

[R.5 Find the constant of variation](#)

Logarithms

[S.1 Convert between exponential and logarithmic form: rational bases](#)

[S.2 Convert between natural exponential and logarithmic form](#)

[S.3 Convert between exponential and logarithmic form: all bases](#)

[S.4 Evaluate logarithms](#)

[S.5 Evaluate natural logarithms](#)

[S.6 Change of base formula](#)

[S.8 Identify properties of logarithms](#)

[S.9 Product property of logarithms](#)

[S.10 Quotient property of logarithms](#)

[S.11 Power property of logarithms](#)

[S.12 Properties of logarithms: mixed review](#)

[S.13 Evaluate logarithms: using properties](#)