

# Intermediate Algebra (1<sup>st</sup> half of Algebra 2 book or “part 1”) Summer IXL Extra Credit Opportunity:

Hello Wonderful Intermediate Algebra (pt. 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 Intermediate Algebra (pt. 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 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! Please email me [stmcdowell@cvcs.org](mailto:stmcdowell@cvcs.org) if you have questions regarding the extra credit assignment.

In addition, it would be very helpful for all Intermediate Algebra 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 Intermediate Algebra (pt. 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 "**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 8<sup>th</sup>.

## Solve equations

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

## Single-variable inequalities

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

## Absolute value equations and inequalities

1. **L.1**Solve absolute value equations
2. **L.3**Solve absolute value inequalities

## Data and graphs

1. **N.1**Interpret bar graphs, line graphs, and histograms
2. **N.5**Interpret box-and-whisker plots

## Relations and functions

1. **Q.2**Domain and range of relations
2. **Q.4**Identify functions
3. **Q.7**Evaluate a function
4. **Q.8**Evaluate 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.1**Simplify radical expressions
2. **EE.2**Simplify radical expressions with variables
3. **EE.3**Simplify radical expressions involving fractions
4. **EE.4**Multiply radical expressions
5. **EE.5**Add and subtract radical expressions
6. **EE.6**Simplify radical expressions using the distributive property
7. **EE.7**Divide radical expressions
8. **EE.8**Simplify radical expressions: mixed review

## Radical functions and equations

1. **FF.4**Solve radical equations I

## Rational functions and expressions

1. **GG.2**Simplify complex fractions
2. **GG.3**Simplify rational expressions
3. **GG.4**Multiply and divide rational expressions
4. **GG.5**Divide 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