Honors (Accelerated) Algebra 2
Summer Required Work:

Hello Wonderful Honors (Accelerated) Algebra 2 students,

I hope you are having a great start to summer! Congratulations for being recommended by your teacher for the Honors Algebra 2 class! This summer work will allow you to be successful in the Honors Algebra 2 Course and be prepared for the Cumulative Test on Chs. 1-3 that you will take within a week from returning to school. You will need to work through the first 3 chapters of the textbook this summer. I will review the first 3 chapters during the first 3 class periods. What makes this course an Honors Algebra 2 Course is your willingness to put time in this summer understanding the first 3 chapters and then by doing that, we will start with Ch. 4 and then complete our journey in Honors with Trigonometry. The normal Algebra 2 class will not be getting to the chapters that cover Trigonometry, so you all are in for a special treat!

Here is the list of the assignments from the book and math skills from IXL all incoming Honors Algebra 2 students should complete over the summer. For the textbook assignments (1) write the problem, (2) show work, and (3) confirm accuracy of answer with the back of the book answers provided. Each assignment should be completed and will be able to be used as notes on the Cumulative Test for Chs. 1-3. For the IXL assignments, each student should complete the sections below **to a score of 75** by working 20-30 minutes per day over the summer vacation. Please do not try to finish all of 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 15-20 minutes per day should not be burdensome and reaching a score of 75 in each section is reasonable. 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. Please email me stmcdowell@cvcs.org

Mrs. McDowell

I have attached to this document the sections of IXL for Honors Algebra 2. **You will want to complete each section to a score of _75_ or higher from the given list below**. Log on to the website: www.ixl.com/signin/cvcs. Then sign in with Capistrano Valley Christian Schools using, "Clever" (with Google) and begin by clicking on the icon "Learning" at the top of the page and then selecting "Skill Plans." Once you click on Skill Plans, you will need to select the subject "Math" and the grade "Alg 2." Then scroll down until you see the Pearson Mathematics Textbook that says Alg 1 (yes it says Alg 1). However, when you click on that icon you will see the option to "pin" our Alg 2 book. Click on Alg 2 and then you will always have our book "pinned" and it will come up for you instead of having to scroll and locate the book each time. You are welcome to do additional sections for practice in the Alg 2 IXLs but only sections 1.1-3.6 will be recorded for a grade. **You DO NOT have to do sections 3.4 & 3.6.** 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 credit. Every student that is going to take Honors Algebra 2 (or Regular Algebra 2) will need to purchase the textbook: **Algebra 2 Common Core, Pearson 2015; ISBN #: 978-0-13-328116-3**

If you are an international student that does not live in a country that can access the IXL website, then I will be grading your work from the book assignment on the last page. To get full credit for that assignment, you must (1) Write out each problem from the book, (2) Show work on how you got your answer, and (3) Check all your answers for accuracy in the back of the book. Credit will not be given if work is not shown on how you got all your answers.

If for some reason you are having trouble logging into your account, please email Joseph Jasper: jjasper@cvcs.org. Mr. Jasper oversees IXL for our entire school.

To clarify: This summer you will be doing IXL assignments (minimum score of 75) that are attached to this email AND the textbook assignments to prepare for the first test of the year given the second week of school covering Chs. 1-3 in the Algebra 2 textbook.

*From the textbook, please complete the following chapter review assignments. Check all your answers in the back of the book to see if you are doing the problems correctly. Please write the problem and show work for each assigned problem. **Remember all the problems you do from the textbook, you will be able to use them as notes to help you succeed on the first test of the semester which is the Cumulative Test Chs. 1-3. The test questions for the Cum Test will be similar to the problems from these 3 assignments**:

Ch. 1: pgs. 51-52 (6-34) even

Ch. 2: pgs. 123-126 (4-52) even

Ch. 3 pgs. 184-186 (4-28) even, not 20, not 22 (do #9 instead); for #28 and #30 solve by substitution or elimination.

Chapter 1

Expressions, Equations, and Inequalities

Textbook section	IXL skills
1.1: Patterns and Expressions	
1.2: Properties of Real Numbers	**Classify numbers** 1. Sort rational and irrational numbers AFH 2. Classify rational and irrational numbers D6J **Simplify expressions** 3. Simplify variable expressions using properties PVC
1.3: Algebraic Expressions	**Sort factors** 1. Sort factors of single-variable expressions K6Q 2. Sort factors of multi-variable expressions 75X **Evaluate expressions** 3. Evaluate variable expressions involving integers T9J 4. Evaluate variable expressions involving rational numbers JDV
1.4: Solving Equations	**One variable** 1. Solve linear equations: complete the solution N83 2. Solve linear equations SNN 3. Solve linear equations: word problems 2BG **Multiple variables** 4. Rearrange multi-variable equations LZD
1.5: Solving Inequalities	**Write inequalities** 1. Write inequalities from graphs NKA 2. Write two-variable linear inequalities: word problems LLV **Linear inequalities** 3. Graph inequalities RK5

4. Solve linear inequalities 98Z

5. Graph solutions to linear inequalities 2H4

Compound inequalities

6. Solve compound inequalities GXA

7. Graph solutions to compound inequalities LHX

1.6: Absolute Value Equations and Inequalities

Equations

1. Solve absolute value equations 2JZ

2. Graph solutions to absolute value equations 39B

3. Write absolute value equations from graphs A73

Inequalities

4. Solve absolute value inequalities UKU

5. Graph solutions to absolute value inequalities G85

Chapter 2
Functions, Equations, and Graphs

Textbook section	IXL skills
2.1: Relations and Functions	**Key features** 1. Domain and range 78A 2. Identify functions LBJ **Find values** 3. Evaluate functions PS2 4. Find values using function graphs FS8 5. Complete a table for a function graph W5Z
2.2: Direct Variation	1. Write and solve direct variation equations 69A
2.3: Linear Functions and Slope-Intercept Form	1. Find the slope of a linear function W67 2. Write the equation of a linear function PBE 3. Graph a linear function LSG
2.4: More About Linear Equations	**Point-slope form** 1. Point-slope form: graph an equation F8H 2. Point-slope form: write an equation PPE 3. Point-slope form: write an equation from a graph LBX **Standard form** 4. Write linear equations in standard form ESP 5. Standard form: graph a line from an equation U6U **Parallel and perpendicular lines** 6. Slopes of parallel and perpendicular lines 6K2 7. Equations of parallel and perpendicular lines VEB
2.5: Using Linear Models	1. Interpret a scatter plot 8BS 2. Write equations for lines of best fit Y2S

p. 3

2.6: Families of Functions

General transformations

1. Function transformation rules R7X

2. Transformations of functions RSN

3. Describe function transformations KT8

Types of transformations

4. Translations of functions F6J

5. Reflections of functions PHV

6. Dilations of functions NNY

2.7: Absolute Value Functions and Graphs

1. Graph an absolute value function 23W

2. Transformations of absolute value functions FYJ

2.8: Two Variable Inequalities

1. Graph a two-variable linear inequality RWU

2. Graph solutions to two-variable absolute value inequalities QYX

Chapter 3
Linear Systems

Textbook section	IXL skills
3.1: Solving Systems Using Tables and Graphs	1. Is (x, y) a solution to the system of equations? NJP 2. Solve a system of equations by graphing M69 3. Solve a system of equations by graphing: word problems T86 4. Classify a system of equations A66
3.2: Solving Systems Algebraically	**Substitution** 1. Solve a system of equations using substitution BW5 2. Solve a system of equations using substitution: word problems DKW **Elimination** 3. Solve a system of equations using elimination 2CN 4. Solve a system of equations using elimination: word problems ARY **Any method** 5. Solve a system of equations using any method FT6 6. Solve a system of equations using any method: word problems ELG
3.3: Systems of Inequalities	1. Is (x, y) a solution to the system of inequalities? RFY 2. Solve systems of linear inequalities by graphing U5D 3. Solve systems of linear and absolute value inequalities by graphing 47Y
3.4: Linear Programming	1. Find the vertices of a solution set for a system of linear inequalities FRG 2. Linear programming AY7

3.5: Systems with Three Variables

1. Solve a system of equations in three variables using elimination 9S5
2. Determine the number of solutions to a system of equations in three variables XAX
3. Solve a system of equations in three variables using substitution X8H

3.6: Solving Systems Using Matrices

1. Solve a system of equations using augmented matrices RCS
2. Solve a system of equations using augmented matrices: word problems QX5