IBMYP A2T Unit 1: Inequalities & Absolute Value Equations

HOMEWORK POLICY: *In order to receive a 3, you must do the following (.5 off for each objective not completed):*

1) Write your name and date along with the assignment in the top margin. All of your work must be done in pencil or a black pen.

2) Copy each problem from the worksheet provided on my website (*or print it out*). All graphing must be done on graph paper.

3) Every problem must be attempted to the best of your ability. Use videos on my website & Google if you need more understanding.

4) All algebraic work must be shown, and it should be neat and organized (hint: circle or underline your answers).

5) All worksheets should be checked and fully corrected using a **colored pen** before coming to class. Go to **cindyedwards.weebly.com.**

6) *Finally, if you have any questions or AHA moments, go to the Unit 1 Google doc provided under the Unit 1 Homework tab on my website.*

DATE	DAILY LEARNING TARGETS & OBJECTIVES	INDEPENDENT PRACTICE (HOMEWORK)	GRADE
Tue/Wed, Sept. 3/4 **Day 01**	• Introduction to IBMYP A2T Expectations • Talk about Mindset & Failure • Talk about the IB Mission & Learner Profile • Introduction to the Function Family **CAV CONNECTION 9/4 – Adjusted Schedule**	Day 01 Solve Linear Equations & Inequalities ***Prerequisite skills*** Get Organized: **Get your binder, paper, graph paper, & dividers!** Fill out the full information sheet & get it signed by your parent!	__ 3
Thu/Fri, Sept. 5/6 **Day 02**	• Solve Absolute Value Equations	Day 02 Solving Absolute Value Equations Day 02 Interactive Google doc (*link on my website*) **Charge your Chromebook for the test next block!**	__ 3
Mon/Tue, Sept. 9/10 **Day 03**	• ***Algebra 2 Pre-Assessment – the score will NOT be counted but will be used to determine growth midway through the year.***	Day 03 Graphing Linear Functions & Compound Inequalities Review	__ 3
Wed/Thu, Sept. 11/12 **Day 04**	• Solve Compound Inequalities	Day 04 Solve Compound & Absolute Value Inequalities Day 04 Interactive Google doc (*link on my website*)	__ 3
Fri/Mon, Sept. 13/16 **Day 05**	• Graph Linear Functions • Graph Absolute Value Functions • *Performance Task: The Senior Project*	Day 05 Graph Absolute Value Functions Start on your Performance Task – **due Sept. 25/26**	__ 3
Tue/Wed, Sept. 17/18 **Day 06**	• Graph Linear and Absolute Value Inequalities **CAV CONNECTION 9/18 – Adjusted Schedule**	Day 06 Graph Linear & Absolute Value Inequalities Day 06 Interactive Google doc (*link on my website*)	__ 3
Thu/Fri, Sept. 19/20 **Day 07**	• Unit 1 Review	Day 07 Unit 1 Test Review Worksheet	__ 3
Mon/Tue, Sept. 23/24 **Day 08**	• **Unit 1 Test** • **Performance Task due Next Block!** **PTSA OPEN HOUSE Thursday, 9/26 at 6:00 PM**	## UNIT 1 TOTAL POINTS:	___ 21

Unit 1: Inequalities and Absolute Value Equations

LEARNING TARGETS: These are the skills you must know by the Unit Test

Target 1:	I CAN identify each function family by its equation and the shape of its graph
Target 2:	Algebra I Prerequisite Skills: I CAN solve linear equations and inequalities; graph linear functions & inequalities
Target 3:	I CAN solve absolute value equations and inequalities
Target 4:	I CAN graph absolute value functions and inequalities
Target 5:	I CAN describe the transformation of the graph of a linear or absolute value function as compared to the graph of the parent function

INQUIRY QUESTIONS:

o Factual: *What is the appropriate order to follow when solving an absolute value equation or inequality?*

o Conceptual: *How does absolute value change the equation or inequality?*

o Debatable: *Is there a situation where an absolute value inequality is NOT equivalent to a compound inequality or vice-versa?*

ENDURING UNDERSTANDINGS

1. Expressions, equations and inequalities allow mathematicians to represent real world quantities.
2. Numbers have specific properties that guide how to perform operations with them.
3. There is often more than one way to solve a problem.

ESSENTIAL QUESTIONS

1. How can the solution to an absolute value equation or inequality be represented in multiple ways?
2. What is the relationship between compound inequalities and absolute value inequalities?

SOL OBJECTIVES

AII.3	The student will solve
	a) absolute value linear equations and inequalities;
AII.6	For absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic functions, the student will
	a) recognize the general shape of function families; and
	b) use knowledge of transformations to convert between equations and the corresponding graphs of functions.

NEW CONCEPTS & SKILLS FOR THIS UNIT

I Know & can Apply…	*I CAN …*
o **VOCAB**: The definitions of: absolute value, disjunction, conjunction, solution set, set notation, interval notation, greater than, less than, midpoint, between, within, intersection, union, range, slope/rate, intercept…	o **Solve** a compound inequality. o **Solve** an equation or inequality containing an absolute value. o **Write** an absolute value inequality when given a number line. o **Graph** an absolute value function and inequality (in graphic form)

PRESKILLS FOR THIS UNIT …*CAN YOU DO THESE WITHOUT THE CALCULATOR?*

I Know & can Apply…	*I CAN …*
o Quotient, ratio, absolute value, greater than, less than o Clear fractions from an equation to simplify calculations. o A single variable equation can have one solution, no solutions, or infinitely many solutions. o The solution(s) to an inequality are a <u>range of values</u> o Three forms to graph a line: point-slope; slope-intercept and standard. o Graph a line when given: a set of data (line of best fit); two points; a slope and a point; parallel to ..., perpendicular to …, etc….don't forget vertical and horizontal	o **APPLY** Order of operations: PEMDAS and SADMEP? o Operations with FRACTIONS! o Operations with percents! o **Solve** a formula in terms of a given variable. o **Simplify** an algebraic expression. o **Evaluate** an algebraic expression when given assigned values for the variables. o **Solve** a single variable equation or inequality. o **Solve** an equation containing an absolute value. o **Graph** a linear function and inequality (from all 3 forms - point-slope; standard; slope-intercept)

The IB Learner Profile for Unit 1 is: Be a Risk Taker – What does that look like?

The Mission Statement of the IB

- The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.
- To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.
- These programs encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.