IB MYP Algebra 2 & Trigonometry

Unit 1: Absolute Value Functions and Equations

1st Quarter ♦ 2016-2017

IBMYP Statement of Inquiry

Applying order facilitates change between equivalent quantities when operating within shared constraints.

☺ This syllabus is a guide only and is subject to change. Any changes will be written on the board.
It is your responsibility is to check the board each day and copy the correct assignment into your planner. ☺

DATE	TOPIC	TEXT REFERENCE	ASSIGNMENT	PA#
September 6 (Tu – A) *Day 1*	Introduction to Course Function Families Overview	2-1	• Signed forms, get supplies, and set up • Complete the Student Information Form • Solving Linear Equations and Inequalities Review WS • Memorize the Function Families	**PA1**
September 8 (Th – A) *Day 2*	Review: Graphing Lines, Solving Compound Inequalities, Factoring Expressions	1-6 5-3	Finish: Graphing Lines, Solving Compound Inequalities, Factoring Expressions Review	**PA2**
September 12 (M – A) *Day 3*	Solving Absolute Value Equations	1-4	Finish Solving Absolute Value Equations WS	**PA3**
September 14 (W – A) *Day 4*	**Algebra 2 VBCPS Pre-Assessment**		Solving Absolute Value Equations Practice WS	**PA4**
September 16 (F – A) ***Adjusted Schedule – CAV Connection*** *Day 5*	Solve Compound and Absolute Value Inequalities	1-6	Solving Absolute Value Inequalities WS	**PA5**
September 20 (Tu – A) **September 26 (M – A)** *Day 6*	Graph Linear and Absolute Value Inequalities	2-8	Graphing Inequalities Practice WS	**PA6**
September 28 (W – A) *Day 7*	**Prerequisite Skills Assessment** Unit 1 Review		Complete the Unit 1 Review and CHECK IT BEFORE NEXT CLASS using the key posted on SharePoint	**PA7**
September 30 (F – A) *Day 8*	**Unit 1 Assessment: Absolute Value Functions and Equations**		p. 59 (1-15 odd)* p. 247 (1-15 odd)* *Check using the answers in the back of the textbook.	**PA8**

☺ Open House is Thursday, SEPTEMBER 29, 2016 at 6:00p.m. ☺

☺ Please encourage your parents to attend!! ☺

Unit 1 Overview

Students will review the familiar Algebra 1 concepts of solving equations and inequalities, including compound inequalities, and graphing linear functions. Students will solve absolute value equations and inequalities and explore the connection between compound inequalities and absolute value inequalities. Students will also identify the shapes of the graphs of parent functions and their equations for ten function families and use transformations to graph linear and absolute value functions and describe the transformation of these functions as compared to their parent functions.

Unit 1 Virginia Standards of Learning

AII/T.4A The student will solve, algebraically and graphically,
a) absolute value equations and inequalities
Graphing calculators will be used for solving and for confirming the algebraic solutions.

AII/T.6 The student will recognize the general shape of function families (absolute value, square root, cube root, rational, polynomial, exponential, and logarithmic) and will convert between graphic and symbolic forms of functions. A transformational approach to graphing will be employed.

AII/T.7 The student will investigate and analyze functions algebraically and graphically.

The BIG Ideas for Unit 1 are . . .

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

The BIGGEST Idea

***K-12 MATHEMATICS OVERARCHING ENDURING UNDERSTANDING*:** Patterns and functional relationships can be represented and analyzed using a variety of strategies, tools and technologies.

Unit 1 Essential Questions

Be sure to answer these questions as we progress through the unit. Some or all of them may be used as essay questions on your unit assessment. ☺

- When can an equation have more than one solution?
- What is the definition of absolute value?
- What is the relationship between compound inequalities and absolute value inequalities?

IBMYP Inquiry Questions

- What is the appropriate order to follow when solving an absolute value equation or inequality?
- How does absolute value change the equation or inequality?
- Can a compound inequality always be written as an absolute value inequality and vice-versa?

Unit 1 Learning Targets

*As we work through this unit, periodically reflect on your own progress with mastering these skills. Determine how well prepared you are to demonstrate your knowledge on the unit assessment **prior to** the test date, and **use** this information to decide upon which learning targets you should focus your time and resources.*

		Skill Mastered ✓	*Summative Assessment Score (points)*	*Summative Assessment %*
Skill Set A	I can identify each function family by its equation and the shape of its graph.			
Skill Set B	I can solve linear equations and inequalities; graph linear functions and inequalities (Algebra I Prerequisite Skills).			
Skill Set C	I can solve absolute value equations and inequalities.			
Skill Set D	I can graph absolute value functions and inequalities.			
Skill Set E	I can describe the transformation of the graph of a linear or absolute value function as compared to the graph of the parent function.			