



VVUHSD Mathematics Pacing Guides Introduction

The following document is the current iteration of the 20-21 Mathematics Pacing Guides. They serve as a veritable roadmap for teachers to consult when laying the foundation for their best first instruction. These guides are living documents, the work upon which began in 2014, after adopting the California State Standards. As the strengths and needs of our students change, so also will the pacing guides in collaboration with the continued commitment of department chairs, and other teacher leaders proficient in understanding backward planning and standards-based instruction.

This year, the five courses in our standard mathematics pathway (Math 7, Math 8, Integrated I, Integrated II, and Integrated III) were edited to meet the recommendations on the [2020-21 Priority Instructional Content](#) for middle school and the [2020-21 Support for Instructional Content Prioritization in High School Mathematics](#) for high school, created by Achieve the Core.

The direction given for the priorities in math is as follows:

“Focus on the depth of instruction, not on the pace... [A]void the temptation to rush to cover all of the ‘gaps’ in learning from the last school year. The pace required to cover all of this content will mean rushing ahead of many students, leaving them abandoned and discouraged. It will also feed students a steady diet of curricular junk food: shallow engagement with the content, low standards for understanding, and low cognitive demand—all bad learning habits to acquire. Moreover, at a time when social emotional wellbeing, agency, and engagement are more important than ever, instructional haste may eclipse the patient work of building academic character and motivation.”

Course	Priority Standards
Math 7 (2021)	7.RP.1, 7.RP.2, 7.RP.3, 7.NS.1, 7.NS.2, , 7.EE.4, 7.SP.A, 7.SP.B, 7.G.B
Math Connections 7 (2021)	7.RP.1, 7.RP.2 7.RP.3, 7.NS.1, 7.NS.2, 7.NS.3, 7.EE.1, 7.EE.2, 7.EE.3, 7.EE.4
Math 7 Honors (2018-2019)	7.RP.1, 7.RP.2, 7.RP.3, 7.NS.1, 7.NS.2, 7.EE.4, 7.SP.A, 7.SP.B, 7.G.A1, 7.G.B4, 8NS.1 , 8.NS.2, 8.EE.5, 8.EE.6, 8.F.2, 8.F.A.3, 8.F.4
Math 8 (2021)	8.NS.1, 8.NS.2, 8.EE.5, 8.EE.6, 8.EE.7, , 8.F.2, 8.F.A.3, 8.F.4,, 8.G.1, 8.G5, 8.G.7, 8.SP.3
Math 8 Honors (2018)	8.G.5, 8.G.7, HS-N.Q.A.1,F-IF.1a, F-IF. 2, A-REI.6, A-CED.1, A-CED 2, G-CO.5,G-CO.7, 8.SP.4, S-ID.2, S-ID.3
Integrated I (2021)	HS-N.Q.A.1, F-IF.1a, F-LEA.2, A-CED.1, A-CED.2, A-REI.6, F-LE.1 a, S-ID.2, S-ID.3, G-CO.5, G-CO.7
Integrated IA (2018)	HS- N.Q.A.1, N.Q.2,N.Q.3, F-IF.1, F-IF.4, F-IF.5, F-IF.6, A-CED.1, A-CED.2, A-CED. a
Integrated IB (2018)	S-ID.2, S-ID.3, S-ID.5, , A-REI.6, A-REI.11, F-LE.1, F-BF.3, G-GPE.4, G-GCO.5, G-GCO.7, G-GCO.8
IM 9 (2021)	N.Q.A.1, N.Q.A.2, A.CED.A.1, CED.A.2, F.IF.A.1, F.IF.B.4, B.5, B.6,F.IF.C.7.A, REI.C.5, F.LE.A.1, F.LE.B.5, GCO.A.2, S.ID.B.5
Integrated I H	HS-N.Q.A.1, F-IF.1a, F-LEA.2, A-CED.1, A-CED.2, A-REI.6, F-LE.1 a, S-ID.2, S-ID.3, G-CO.5, G-CO.7 , N-RN.1, N-RN.2, N-RN.3, G-CO.9,
Integrated II (2021)	G-CO.9, G-SRT.1, G-SRT.2, G-SRT.4, G-SRT 5, G-SRT.6, G-SRT.8, A-SSE.3a, F-IF.4, F-IF.5, F-IF.7a, A.CED.1, A.CED.2, F.BF.3
Integrated II H	G-CO.9, G-SRT.1, G-SRT.2, G-SRT.4, G-SRT 5, G-SRT.6, G-SRT.8, A-SSE.3a, F-IF.4, F-IF.5, F-IF.7a, A.CED.1, A.CED.2, F.BF.3 , A.APR.2, A.APR.3, A.APR.4, A.APR.5
Integrated III (2021)	F.IF.9, A.CED.2, A-CED.3, A.APR.3, F.BF.3, F.IF4, F.IF.7c and e, A.REI.2, F.IF.9, S.ID.4, F.TF.1, F-TF.2 , F-TF.5
Integrated III H (needs pacing)	F.IF.9, A.CED.2, A-CED.3, A.APR.3, F.BF.3, F.IF4, F.IF.7c and e, A.REI.2, F.IF.9, S.ID.4, F.TF.1, F-TF.2 , F-TF.5, N.CN.3, N.CN.4, N.CN.6, F-TF.4, F-TF.6, F-TF.7, F-TF.9, S.MD.6
Business Math	No Standards
Real World Business	No Standards

Math	
Basic Stats	S.CP.1, S.CP.2, S.MD.2, S.CP.3, S.IC.1, S.IC.3, S.ID, S.ID 4, S.ID.6

7th Grade Pacing Guide 2021-22

Priority Standards from Achieve the Core **Eliminate**, **Incorporate**, **Emphasize**, **Combine**, **Integrate**, **Reduce** .

	Modules	Learning Intentions	CCSS	Pacing
1 st Nine Weeks	Review	+ / - 5 Days for Testing		2-3 weeks
	4: Ratios and Proportionality *8: Modeling Geometric Figures (Incorporate scale drawings as part of instruction of ratios/ proportions)	Learning Intention 1: I will understand unit rates. (7.RP.1) A. I can make comparisons with ratios and unit rates. B. I can compute unit rates from ratios with different units. C. I can compute unit rates from complex fractions. D. I can use the context of a problem to identify the meaning of a unit rate. E. I can use a unit rate to determine if two or more ratios are proportional (equivalent). Learning Intention 2: I will understand proportional relationships between different quantities. (7.RP.2) A. I can identify a constant of proportionality from a graph. B. I can identify a constant of proportionality from a table. C. I can identify a constant of proportionality. from an equation. D. I can explain why the constant of proportionality is reasonable when using a real world example. E. I can determine if two quantities are proportional by examining a table. F. I can determine if two quantities are proportional by observing if a graph of a straight line goes through the origin. G. I can determine if two quantities are proportional by examining an equation H. I can explain what a point on a graph means in terms of the relationship between the quantities. Learning Intention 3: I will use my understanding of ratio and proportion to make scale drawings. (7.G.1) A. I can compute actual lengths from a scale drawing.	7.RP.1 7.RP.2 7.G.1*	4 weeks

2 nd Nine Weeks		<p>B. I will determine the area ratio using scale drawings on graph paper.</p> <p>C. I can reproduce a scale drawing given a different scale factor.</p> <p>D. I can identify the scale factor between two different figures.</p>		
	1: Adding and Subtracting integers;	<p>I can subtract rational numbers by using the additive inverse.</p> <p>I can use a number line to show the distance between two rational numbers.</p> <p>I can add and subtract rational numbers in real-world situations.</p>	<p>7.NS.1</p> <p>7.NS.2</p> <p>7.NS.3</p>	2 weeks
	2: Multiply and Divide Integers;	Two types of division: Partitive and Quotative Division		2 weeks
	3: Rational Numbers	<p>I can solve real-world problems involving operations with rational numbers.</p> <p>I can solve real-world problems involving complex fractions.</p>		3 weeks
	5: Proportions and Percent	<p>Learning Intention 1: I will use proportional relationships to solve problems. (7.RP.3)</p> <p>A. I can use proportional relationships to solve problems involving percent markup and markdown.</p> <p>B. I can use proportional relationships to solve problems involving percent increase and decrease.</p> <p>C. I can use proportional relationships to solve simple interest problems.</p> <p>D. I can use proportional relationships to solve problems involving tax.</p> <p>E. I can use proportional relationships to solve problems involving percent error.</p> <p>Learning Intention 2: I will understand that I can rewrite an expression in different representations (verbal, algebraic, visual). (7.EE.2)</p> <p>A. I can use the properties of operations to write equivalent expressions to show understanding of the context. (For example, a 5% increase can be written as $a+0.05a$, is the same as $1.05a$, which is an application of the Distributive Property.)</p> <p>B. I can use the properties of equality to write equivalent expressions to show understanding of the context.</p>	<p>7.RP.3</p> <p>7.EE.2</p> <p>7.EE.3</p>	2.5 Weeks

		<p>Learning Intention 3: I will use tools to solve multi-step real life problems (including problems with rational numbers). (7.EE.3)</p> <ul style="list-style-type: none"> A. I know that rational numbers of different forms represent the same value. B. I can convert between fractions, decimals and percent as needed. C. I can use estimation to explain why my answer is reasonable. D. I can choose any tool to help me make sense of and solve these problems, including tables, charts, estimation, calculator (Desmos), algebra tiles, tape diagrams, number lines, counters, etc. E. I can apply properties of operations to solve multi-step equations. 		
	<p>Module 6A 6: Evaluating Expressions (introducing expressions, wait to get to equations)</p>	<p>7. EE.1: I can expand and factor.</p> <ul style="list-style-type: none"> A. I can expand linear expressions. B. I can factor linear expressions. C. I can use the distributive property of multiplication over addition. D. I can simplify algebraic expressions. E. I can use the commutative property of multiplication. F. I can combine like terms. <p>7. EE.2: I can create equivalent expressions for a given situation.</p> <ul style="list-style-type: none"> A. I can give 2 equivalent expressions for a real world scenario. (For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”) 	<p>7.EE.1 7.EE.2</p>	<p>1.5 Weeks</p>
<p>3rd Nine Weeks</p>	<p>Module 6B <u>6: Expressions and Equations;</u> *8: Modeling Geometric Figures (Incorporate problems regarding angle relationships)</p>	<p>Learning Intention 1: (7.EE.3) ??</p> <p>Learning Intention 2: I will use variables to represent quantities and solve real world equations. (7.EE.4)</p> <ul style="list-style-type: none"> A. I can solve problems of the form $px+q=r$ using properties of operations. B. I can solve problems of the form $p(x+q)=r$ using properties of operations. C. I can translate verbal equations into algebraic equations. D. I can use information from a real-life application to write an algebraic equation. E. I can think strategically to solve these problems in multiple ways. F. I can check my answer by substitution. G. I can explain the steps, or sequence of steps, that I used to find my answer. H. I can check my answer by substitution. I. I can explain the steps, or sequence of steps, that I used to find my answer. 	<p>7.EE.3 7.EE.4 7.G.5*</p>	<p>4 Weeks</p>

		<p>J. I can identify a graph that illustrates my answer.</p> <p>K. I can interpret the meaning of an inequality in real-world problems.</p> <p>Learning Intention 3: I will use facts about different types of angles to write and solve multi-step problems. (7.G.5)</p> <p>A. I can use complementary/supplementary angle relationships to write and solve equations.</p> <p>B. I can use vertical/adjacent angle relationships to write and solve equations.</p>		
	7: Inequalities	<p>Learning Intention 1: I will use variables to represent quantities and solve real world inequalities. (7.EE.4)</p> <p>A. I can solve problems of the form $px + q \geq r$ or $px + q \leq r$ using properties of operations.</p> <p>B. I can solve problems of the form $p(x + q) \geq r$ or $p(x + q) \leq r$ using properties of operations.</p> <p>C. I can think strategically to solve these problems in multiple ways.</p> <p>D. I can check my answer by substitution.</p> <p>E. I can explain the steps, or sequence of steps, that I used to find my answer.</p>	7.EE.4	1.5 Weeks
	9: Circumference, Area and Volume	<p>7.G.4: I will know the formulas for the area and circumference of a circle and use them to solve problems.</p> <p>A. I know the formula for the area of a circle.</p> <p>B. I know the formula for the circumference of a circle</p> <p>C. I can use formulas to solve problems.</p> <p>D. I can explain the relationship between the circumference and area of a circle.</p> <p>7.G.6: I can solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</p> <p>A. I can apply the appropriate formula to solve the area of figures.</p> <p>B. I can apply the appropriate formula to solve the volume of figures.</p> <p>C. I can apply the appropriate formula to solve the surface area of figures.</p> <p>D. I can use the given information to find the missing value. I can solve problems of the form $px + q < r$ using properties of operations.</p> <p>E. I can check my answer by substitution.</p> <p>F. I can explain the steps, or sequence of steps, that I used to find my answer.</p> <p>G. I can identify a graph that illustrates my answer.</p> <p>H. I can interpret the meaning of an inequality in real-world problems.</p>	7.G.4 7.G.6	2 Weeks

4 th Nine Weeks	10: Random Samples and Populations; 11: Analyzing and Comparing Data	<p>Learning Intention 1: (7.SP.1) Students use random sampling to draw inferences about a population.</p> <p>A. I can define the terms population, random sample, sample size, generalizations, valid, biased and unbiased.</p> <p>Learning Intention 2: (7.SP.2) Students analyze and interpret data from a random sampling to draw inferences about a population.</p> <p>A. I can use correct terms to explain what I notice about the sample.</p> <p>B. I can generalize what I see happening in a random sample to a larger population.</p> <p>Learning Intention 3: (7.SP.4) Students find and use measures of center and variability.</p> <p>A. I can find the center in a data sample using dot plots or box-and-whisker plots.</p> <p>B. I can find the mean, median and mode of a data sample.</p> <p>C. I can use the center and variability to compare two populations.</p>	7.SP.1 7.SP.2 7.SP.3 7.SP.4 6.SP.A	4 Weeks
	12: Experimental Probability; 13: Theoretical Probability and Simulations	<p>Learning Intention 1 (7.SP.5): Students will understand that theoretical probabilities are represented by numbers between 0 and 1.</p> <p>A. I will use numbers between 0 and 1 to represent the likelihood of an event.</p> <p>B. I know that probability cannot be a negative number.</p> <p>C. I also know that the probability of an event cannot be greater than 1.</p> <p>Learning Intention 2 (7.SP.6): Students will evaluate theoretical probabilities as being between 0 and 1.</p> <p>A. I will use numbers between 0 and 1 to represent the likelihood of an event.</p> <p>Learning Intention 3 (7.SP.7): I can analyze a probability model.</p> <p>A. I can state the likelihood of an event by interpreting the probability.</p> <p>B. I know that numbers closer to zero are less likely to happen.</p> <p>C. I also know that numbers closer to one are more likely to happen.</p> <p>D. I can explain probability in terms of a real world context.</p>	7.SP.5 7.SP.6 7.SP.7 7.SP.8	3.5 weeks

Priority Standards from Achieve the Core Eliminate, Incorporate, Emphasize, Combine, Integrate, Reduce .

7th Grade Math Connections

COURSE CONTENT AND SUGGESTED TIME ALLOTMENT: Content sequencing, activities, and time allocations are only suggestions and may be adjusted to suit school site curriculum plans, available materials, and student needs.

Unit 0: Mindset

Duration: 10 days

Description: This unit will help you build relationships with students while teaching them the importance of having a growth mindset and how to understand the Standards for Mathematical Practice. A positive attitude and growth mindset are critical for math learning. They can help students persevere and see the rewards of productive struggle. Without a growth mindset, it becomes easy for students to fall into a pattern of avoiding risks and feeling defeated.

Required Assignment:

MDTP 7th Grade Readiness

$R + R = R$

Growth Mindset Quiz

I am a Mathematician Poster

Suggested Activities: [YouCubed Activities](#)

Required Materials: NCTM Warm-up Template and 3-Act Math Recording Sheet

Standards Addressed:

The Standards for mathematical practice

Best Practices for Orchestrating Mathematical Discussion

Unit 1: Operations with Whole Numbers

Duration: 20 Days

Description: This unit will cover unfinished learning with whole number operations. Students will be able to understand place value structure, fluently perform operations of addition, subtraction, multiplication and division of whole numbers, use factors, multiples, prime factorization, and relatively prime numbers to solve problems and recognize equivalent representations for the same number and generate them by decomposing and composing numbers.

Required Assignment: Pre and post assessment, Clothesline math, Mathematical Tasks

Suggested Activities: Interactive manipulatives, skip counting

Required Materials: Clothesline Math, Base-ten blocks, number lines, colored tiles

Standards Addressed: 3.OA.1, 2 & 3; 4.OA.1,2,3 & 4; 5.OA.1 & 2 4.NBT.4, 5, & 6

Unit 2: Operations with Fractions

Duration: 25 days

Description: This unit will cover unfinished learning with fractions. Students will

- recognize equivalent representations for the same number and generate them by decomposing and composing numbers;
- develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers;
- use models, benchmarks, and equivalent forms to judge the size of fractions;
- recognize and generate equivalent forms of commonly used fractions, decimals, and percents;
- work flexibly with fractions, decimals, and percents to solve problems;
- compare and order fractions, decimals, and percents efficiently and find their approximate locations on a number line;
- Extend the operations of numbers to fractions.

Required Assignment: all mathematical tasks, 3-act math using 5 practices for orchestrating discussion, pre- and post-assessment

Suggested Activities: virtual tasks, Doorbell rang task, Learn Zillion lessons, Routines for Reasoning

Required Materials: pattern blocks, fraction strips, virtual manipulatives, and dice.

Standards Addressed: 3.NF. A2, 4.NF. A1, 4.NF. B3, 5.NBT.1-4, 5.NBT.5-7

Unit 3: Ratios and Proportions

Duration: 15 days

Description: Students will build on their prior work in fractions and in multiplication and division as they study the concepts and language of ratios and unit rates. They use proportional reasoning to solve problems. In particular, students solve ratio and rate problems using tape diagrams, tables of equivalent ratios, double number line diagrams and equations.

Required Assignment: all mathematical tasks, 3-act math, Capturing Quantities Routines for Reasoning, pre- and post-assessment

Suggested Activities: virtual tasks, Desmos activities, VNPS activities

Required Materials: pattern blocks, chart paper, graph paper, tape diagrams

Standards Addressed: 6.RP.A.1, 6.RP.A.2, 6.RP.A.3

Unit 4: Integers

Duration: 20 days

Description: Students continue to build an understanding of the number line in Unit 1 from their work in 6th grade. They learn to add, subtract, multiply, and divide integers, while maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. Students will then apply their understanding to perform the four operations on positive and negative rational numbers in the context of real-world situations

Required Assignment: all mathematical tasks, 3-act math using 5 practices for orchestrating discussion, pre- and post-assessment, Clothesline

Math

Suggested Activities: virtual tasks, Desmos,

Required Materials: Number lines, two-colored counters, work mats, pattern blocks

Standards Addressed:CCSS-M Clusters 7.NS.A, 7.EE.B

Unit 5: Proportional Reasoning and Percents

Duration: 35 days

Description: In **Unit 5**, students will extend their understanding of ratios and proportionality to solve a wide variety of percent problems. Problems in this unit include simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, and percent error.

Required Assignment: all mathematical tasks, 3-act math using 5 practices for orchestrating discussion, pre- and post-assessment,

Suggested Activities: virtual tasks, Desmos activities, VNPS activities

Required Materials: tape diagrams, double number lines, calculators

Standards Addressed: CCSS-M Clusters 7.RP.A, 7.EE. A, 7.EE.B

Unit 6: Expressions and Equations

Duration: 25 days

Description: consolidates and expands students' previous work with generating equivalent expressions and solving equations. They apply the properties of operations as strategies to factor and expand linear expressions with rational coefficients. They solve real-life and mathematical problems using numerical and algebraic expressions, and equations.

Required Assignment: all mathematical tasks, 3-act math using 5 practices for orchestrating discussion, pre- and post-assessment,

Suggested Activities: virtual tasks, mobile math

Required Materials: clothesline math, manipulatives,

Standards Addressed: CCSS-M Clusters 7.EE.A, 7.EE.B

Unit 7: Graphing

Duration: 20 days

Description: students build on their 6th grade experiences with ratios, unit rates, and fraction division to analyze proportional relationships. They decide whether two quantities are in a proportional relationship, identify constants of proportionality, and represent the relationship by tables, graphs, and equations.

Required Assignment: all mathematical tasks, 3-act math using 5 practices for orchestrating discussion, pre- and post-assessment,

Suggested Activities: virtual tasks, Desmos activities,

Required Materials: graph paper, rulers, geoboards

Standards Addressed: CCSS-M Cluster 7.RP.A

August 2020

[Activity](#)

[booklet for Number Sense](#) 4th grade

[Resource](#) Bank

[Activity booklet for Number Sense](#) 5th Grade

Monday	Tuesday	Wednesday	Thursday	Friday
		July 29 Teacher Work Day	July 30 Warm Up Overview Mini-PD 10:00-12:00 p.m. Template for Warm-Ups Google Slides for Warm Up	July 31 Teacher Work Day
Aug. 03 Unit 0 Mindset Day 1 Slides	04 Day 2 Slides Growth Mindset Quiz	05 Day 3 Slides Mindset Video	06 Day 4 Slides R + R = R	07 Day 5 Slides Digital Team Builder (This is a breakout of the room activity.)
10 In Class: Continue slides from week 1 Begin using Warm UP Template Individual Assignments or Optional Group work: Virtual hollow squares	11 In Class: MDTP Continue working on hollow squares activity	12 In Class: MDTP	13 In Class Introduce: And I'm a Mathematician Poster Professional Development (12:45 to 2:50) Individual Assignments or Optional Group work: Mathematician Slides	14 In Class: Four 4's Activity (Digital Link)
17 Pre-Assessment is open Aug. 17-20 (MC7-Unit 1)	18 Digital Link Race to 100	19 Penny Task Digital Task Pix and Mix Partner Task Digital version "Pix and Mix" in Google form templates Rubric (This should be done as partners or an individual assignment)	20 Unit 1 Operations with whole numbers Introducing Clothesline math different representations of a number Digital Clothesline Math (Resource Site) Professional Development (12:45 to 2:50)	21 Unit 1 Operations with whole numbers Introducing Clothesline math different representations of a number Digital Clothesline Math (Resource Site) Video for Teachers Desmos Demo

24 Closest 10 Rounding using a number line or a hundreds chart (CC Companion pg 66-67) Illustrative Task	25 Adding/Subtracting using models (CC Companion pg. 68-81) Break Apart Activity	26 Model using ten frames and base ten blocks Virtual Manipulatives Jared's Problem	27 Closest to 1000 Open Middle Google Slides for Close to 1000 Professional Development	28 Addition performance task Google forms for task-access through Google Form Templates
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September 2020

Monday	Tuesday	Wednesday	Thursday	Friday
31 Model with a number line WHat's the Difference Additional Practice	1 District Star Assessment	2 Model using counting up strategies Volunteer Fire Station	3 Shop til you Drop Student Activity Professional Development	4 Addition and subtraction task OR Quizziz or Teacher designed Formative Assessment
7 NO SCHOOL LABOR DAY	8 Patterns in the multiplication chart Student document	9 Multiplication as an array Colored tiles Virtual Graph Paper	10 Factors and multiples? Book sharing Professional Development	11 Multiplication using area model Additional Practice WS
14 Multiplication using an area model (Video) Activity from video	15 Strategies chart Multi Digit multiplication	16 Division of whole numbers Google Slides for Division (Slides 3-7 for today-note slide 5 make multiple copies of for students to work in groups) Fair Tickets	17 Partial Products Worksheets (assign any pages for student practice) Professional Development	18 Google Slides for Division (Slides 8-11) Multi Digit Division Division

21 Buffer Day Optional: MC7 Unit 1 Quiz (See Google Form Templates)	22 Buffer Day	23 Unit 1 Post Assessment open Sept. 23-Sept. 25th	24 Unit 2: Fractions 3-Act Candy Bar Professional Development	25 Naming Fractions Cards
28 Naming Fractions Task (Use the Google Form in Templates)	29 3-Act Math-Fractions (Orange Slices) Teacher Notes	30 Fractions Pre-Assessment window opens		

October 2020

<https://hcpss.instructure.com/courses/108/pages/5-dot-nf-dot-4-about-the-math-learning-targets-and-rigor> [Yale Initiative Fractions](#)

Monday	Tuesday	Wednesday	Thursday	Friday
			1 Fractions Pre-Assessment Optional Online Activity Professional Development	2 Skip counting with Fractions Meaning of a Fraction
5 Skip counting with Fractions Meaning of a Fraction	6 Use a number line to locate fractions	7 Clothesline math with Fractions Slides for Page 6	8 You choose an activity: Fractions on a Numberline Fractions Puzzle Pieces Professional Development	9 Assessment - Formative Check for understanding (Fractions on a number line by Amy Bell)
12 Fall Break	13 Fall Break	14 Fall Break	15 Fall Break	16 Fall Break

19 3-Act Math-Fractions Teacher Notes Apple Eating	20 Creating Fraction Strips Class Instruction Slides Braining Camp	21 Class Instruction Slides Individual Practice Optional Practice: Worksheet 2	22 Fair Trade Slides Fair Trade for a Hexagon (Page 1-2) Professional Development	23 Fair Trade for a Hexagon (Page 1-2) Wipe It Out Game
26 Finding Fractional part slides Finding Fractional Part (Page 3-4)	27 Finding Fractional part slides Finding Fractional Part (Page 3-4)	28 King's Crown Task Kings Crown Slides (Extra: Fraction 4 in a Row)	29 Buffer Day "MC 7 Equivalent Fractions" Google Forms Quiz in Templates Equivalent Fractions Activity Professional Development	30 3-Act Math Weighing pears

November 2020

Monday	Tuesday	Wednesday	Thursday	Friday
2 Addition/Subtraction of Fractions (Page 8) Google Slides	3 Manipulative for Practice Handout	4 Addition/Subtraction of Fractions using a model Google Slides for Area models	5 Handout	6 Addition/Subtraction Area Model with word problems
9 Addition and subtraction task Rubric	10 NCTM Game	11 Veteran's Day	12 3-Act Multiplication Professional Development	13 Multiply whole number by fraction Google Slides Video Domino Link Dice Link
16 Google Slides	17 Google Slides Frac x Frac Video Learn Zillion Student Practice	18 Google Slides Student Assignment	19 Mixed number multiplication Professional Development Google Slides	20 Buffer day Review Optional Go Formative Gizmos multiply fractions
23 Thanksgiving Break	24 Thanksgiving Break	25 Thanksgiving Break	26 Thanksgiving Break	27 Thanksgiving Break

December 2020

Monday	Tuesday	Wednesday	Thursday	Friday
30 Multiply with mixed numbers	1 Assessment Task (Teacher) Student Task Don't forget the meeting on 12-01 to work on Learn Zillion.	2 Begin Learnzillion How will students interact with the platform video Warm up to Digital Items	3 LZ 6.4.4 : How many groups? (Part 1)	4 6.4.4 Cool Down (digital) How many groups? (Part 1)
7 LZ 6.4.5 How many groups? (Part 2) Division using models Division of Fractions using pattern blocks	8 LZ 6.4.5 Cool Down How many groups? (Part 2) Worksheet on Dividing Fractions w/ pattern blocks Pizza Sharing	9 LZ 6.4.6 : Using diagrams to find the number of groups Division using a numberline	10 LZ 6.4.6 Cool Down Using diagrams to find the number of groups Professional Development	11 Buffer
14 Review for Post Assessment Fractions Post-Assessment Open 12-14 to 12-18	15	16	17	18
21	22	23	24	25
28	29	30	31	

January 2021 [\(Data Reporting Sheet\)](#)

Monday	Tuesday	Wednesday	Thursday	Friday
				1
4 Non-Student Day IAB: Grade 4: Number and Operations-Fractions	5 Buffer Day Review how to login to Learnzillion compliments of Josh Silva	6 LZ 6.4.8	7 LZ 6.4.8 Cool Down	8 LZ 6.4.9-SKIP LZ 6.4.10
11 LZ 6.4.10 Cool down	12 LZ 6.4.11 Assign Applet dividing a fraction by a fraction	13 LZ 6.4.11 Cool Down	14 Mid-unit assessment on Learn Zillion (report data from assessment by 1-22-21) Professional Development	15 Mid-unit assessment on Learn Zillion
18 Martin Luther King Day	19 IAB administration IAB: Grade 4: Number and Operations-Fractions	20 IAB administration IAB: Grade 4: Number and Operations-Fractions	21 Make-up Day Complete 6.4 Mid-unit assessment OR Desmos Data recording Link	22 Buffer Day
25 Unit 3: Proportional Reasoning 7.2 Check your readiness Data recording Link	26 7.2.1: One of these things is not like the other	27 7.2.1: One of these things is not like the other	28 7.2.2: Introduce Proportional relationships with tables. Professional Development	29 7.2.2: Introduce Proportional relationships with tables.

February 2021 ([Geogebra Applets](#))

Monday	Tuesday	Wednesday	Thursday	Friday
1 7.2.3: More about constant of proportionality	2 7.2.3: More about constant of proportionality	3 Student Task	4 Student Task	5 Go Formative Quiz
8 7.2.4: Proportional Relationships and Equations (Skip 4.3 Denver to Chicago)	9 7.2.4: Proportional Relationships and Equations (Skip 4.3 Denver to Chicago)	10 Buffer Day Desmos Activity for Lesson 7.2.2	11 Buffer Day Ratio Table Review Quizziz Professional Development	12 President's Holiday
15 President's Holiday	16 7.2.5: Two equations for each relationship	17 7.2.5: Two equations for each relationship 7.2.6: Skip	18 Go Formative	19 Proportional Relationships using Tables Review NearPod Practice
22 7.2.7: Comparing Relationships with Tables Slides Geogebra	23 7.2.7: Comparing Relationships with Tables Skip 7.2.8 and 7.2.9	24 Ratios Assessment	25 Assessment-Day 2 Professional Development	26 Buffer Day

March 2021

Monday	Tuesday	Wednesday	Thursday	Friday
1 Review Coordinate Plane Nearpod Notes-Optional	2 Review Coordinate Plane Nearpod Notes-Optional	3 Proportional vs. non-portionel graphs (Video) Two Truths and a lie	4 7.2.10: Introducing Graphs of Proportional Relationships using Desmos	5 7.2.10: Introducing Graphs of Proportional Relationships using Desmos
8 7.2.11: Slides Interpreting Graphs of Prop. Relationships	9 7.2.11: Slides Interpreting Graphs of Prop. Relationships	10 District IAB Ratios and Proportional Relationships-7th grade	11 District IAB Professional Development	12 Buffer day Pi Day Discovery
15 Grandma's Cookies Answer Key to Slides Four Representations using Classroom Activity	16 Unit 4: Rational Numbers Cliff Diving Task	17 Cliff Diving Task	18 Clothesline math (Slides 1-5)	19 Introducing integers NearPod Introduce Integers using Geogebra Flocabulary Integer Rap
22 Introducing integers NearPod	23 Seagulls and Sharks slides Student practice	24 6.2: Desmos Activity	25 Zero Pairs (Slides 6-14) Gizmos Professional Development	26 Buffer Zero pairs desmos
29 Spring Break	30 Spring Break	31 Spring Break		

April 2021

Monday	Tuesday	Wednesday	Thursday	Friday
			1 Spring Break	2 Spring Break
5 Buffer Day	6 Introduction to adding integers	7 Addition/Subtraction Slides Chip Model (Slides 2-11) Student Worksheet	8 Addition Chip Model Professional Development	9 Addition on Horizontal Number line (Slides 12-18)
12 Addition on Horizontal Number line (Slides 12-19)	13 Addition on a Vertical Number line (Slides 20-29)	14 Addition on a Vertical Number line Rules for adding integers (student worksheet)	15 Subtraction Chips (Slides 30-40) Student Worksheet	16 Subtraction Chips
19 Subtraction on a Number Line (Slides 41-46)	20 Walk the Line WS	21 Rules for subtraction integers (student worksheet)	22 Assessment Professional Development	23 Multiplication
26 Multiplication	27 Division	28 Division	29 Review	30 Assessment Buffer

May 2021

Monday	Tuesday	Wednesday	Thursday	Friday
3 Unit 5: Expressions and Equations 7.6 Check your Readiness	4 7.6 Check your Readiness	5 LZ 7.6.1	6 LZ 7.6.1 Professional Development?	7 LZ 7.6.2
10 LZ 7.6.2	11 LZ 7.6.3	12 LZ 7.6.3	13 LZ 7.6.4	14 LZ 7.6.4
17 LZ 7.6.5	18 LZ 7.6.5	18 LZ 7.6.6 Desmos	20 Review	21 Review
24 Last Day of School	19	20	21	22
25	26	27	28	28

VVUHSD Math Pacing Guide

Content Area: Math Grade: Accelerated 7th

Don't forget to use svmimac.org (MARS tasks). The password to get into the MARS tasks is currently **WestEd-SVMI**. The password to get into the tasks is **it'stime4m@th!**.

Resources: <https://ccssmathactivities.com/performance-tasks-grade-7/>

<https://www.illustrativemathematics.org/content-standards/7>

Essential Standards are the standards that need to have the most instructional time and students should be able to do tasks at a high cognitive level for those standards. GoMath! is not enough to prepare students for the CAASPP. Tasks are essential to increase student Depth of Understanding (DOK).

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1	Unit 1 Add, Subtract, Multiply, & Divide Rational Numbers <u>7.NS.1</u> <u>7.NS.1.a.b.c.d.</u> <u>7.NS.2</u> <u>7.NS.2.a.b.c.d</u> 7.NS.3 Rational and Irrational Numbers 8.NS.1 8.NS.2 Note: Everything in these standards is around understanding of the Real Number System.							Unit 2 Ratios, Proportions, and Percents 7.RP.1 7.RP.2 7.RP.3	
Supporting Standards	7.NS.A.3 8.EE.A.2 8.EE.A.4 Rewriting Expressions and Applying Properties 7.EE.1, 7.EE.2 Solving Multi-step Real Life and Mathematical Problems 7.EE.3 Integer Exponents 8.EE.1 Scientific Notation 8.EE.3, 8.EE.4								
Item (DOK) - (Items correspond to released CAASPP items) Get It Here!!	SBAC: 2(1), 3(1), 4(1), 5(2), 6(1), 7(1), 8(1), 23(2 - 6th grade content), 32(2), Note: The number in parenthesis is the DOK of the item							SBAC: 10(2), 17(2), 20(2), 28(2), 29(3 - 6th grade content), 33(3)	

Alignment to Text & Materials	<div>GO MATH</div> <div>Modules 1, 2, and 3</div> <div>Modules 14 and 15</div> <div>Multiplication of Rational Numbers Task (Cat Food)</div>							<div>GO MATH</div> <div>Module 4</div> <div>Short Tasks: Ratios and Proportions</div> <div>Use Ratios in Context</div>	
2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	<div>Unit 2</div> <div>Ratios and Proportionality</div> <div>7.RP.1</div> <div>7.RP.2</div> <div>7.RP.2.a.b.c.d</div> <div>7.RP.3</div> <div>Unit 2</div> <div>Proportions and Percent</div>				<div>Unit 3</div> <div>Equations and Inequalities</div> <div>7.EE.1</div> <div>7.EE.2</div> <div>7.EE.3</div> <div>7.EE.4A,B</div> <div>8.EE.1</div> <div>8.EE.2</div> <div>8.EE.3</div> <div>8.EE.4</div> <div>8.EE.5</div> <div>8.EE.6</div> <div>8.F.4</div> <div>8.EE.7A,B</div> <div>(Week 9 can be used for review and testing)</div>				
Supporting Standards		Rewriting Expressions 7.EE.2 Solving Multi-step Equations 7.EE.3			Properties and Linear Equations 7.EE.1 Rewrite Expressions 7.EE.2 Proportional Relationships 8.EE.5 Non Proportional Relationships 8.F.3, 8.F.2 Unit Rate 8.EE.5				
Item (DOK) - (Items correspond		SBAC: 9(2), 13(2), 14(2), 19(2), 25(2), 26(3)			SBAC: 12(2), 16(2), 22(2), 30(3), 31(2)				

to released CAASPP items) Get It Here!!									
Alignment to Text & Materials			GO MATH Module 5 Solve percentage problems (Sneakers)		GO MATH Modules 6 and 7 Building linear expressions Modules 16,17, 18				
3	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
		Unit 4 Statistics and Probability 7.SP.1 7.SP.2 7.SP.3				Unit 5 Probability 7.SP.6 7.SP.7 7.SP.8		Unit 5 Scale Drawings, Geometric Shapes, and Angles 7.G.1 7.G.2 7.G.5	
Supporting Standards		7.SP.4				7.SP.5		7.G.3	
Item (DOK) - (Items correspond to released CAASPP items) Get It Here!!		SBAC: 1(1),				SBAC: 11(1)		SBAC: 15(2)	
Alignment to Text & Materials		GO MATH Modules 10 and 11 Election Poll				GO MATH Modules 12 and 13 Counters		GO MATH Module 8 Scale drawings (photos)	
4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	Scale Drawings, Geometric Shapes, and Angles 7.G.1	Unit 5 (cont) Geometric Figures and Relationships Circles & Area & Volume 7.G.4 7.G.6			Review for Testing Administer cumulative common assessment test			Unit 6 Transformations Translations, Reflections, Rotations Dilations (not tested until eighth grade - teach at end of year)	

	7.G.2 7.G.5			8.G.1 8.G.2 8.G.4
Supporting Standards	7.G.3			Algebraic Representations of Transformations 8.G.3 Algebraic Representations of Dilations 8.G.4
Item (DOK) - (Items correspond to released CAASPP items) Get It Here!!		SBAC: 18(2), 21(2), 24(2), 27(2)		
Alignment to Text & Materials	GO MATH Module 8	GO MATH Module 9 Circles (Pizzas)		

8th Grade Pacing Guide 2020-21

Priority Standards from Achieve the Core Eliminate, Incorporate, Emphasize, Combine, Integrate .

	Module	Learning Intentions	CCSS	Pacing
1 st Nine Weeks			Review	2 weeks
	1 Real Numbers		8.NS.1 8.NS.2	2 weeks
	2 Exponents and Scientific Notation	Students will use, understand and apply the rules for integer exponents, including the product rule, quotient rule. Students will use Scientific Notation to express very large and/or very small numbers.	8.EE.1 8.EE.2 8.EE.3 8.EE.4	3 weeks
	3 and 4 Proportional Nonproportional Relationships		8.EE.5 8.EE.6	2 weeks
2 nd Nine Weeks	3 and 4 Proportional Nonproportional Relationships		8.EE.5 8.EE.6	2 week
	5 and 6 Writing Linear Equations, Functions		8.F.3 8.F.4 8.F.5	3 weeks

	7 and 8 Solving Linear Equations Solving Systems of Linear Equations		8.EE.7 8.EE.8	4 weeks
3 rd Nine Weeks	9 and 10 Transformations Congruence Similarity		8.G.1 8.G.2 8.G.3 8.G.4 8.G.5	3 weeks
	11 Angle Relationships		8.G.6 8.G.7 8.G.8	2 weeks
	12 Pythagorean Theorem		8.G.9	2 weeks
	13 Volume			

4 th Nine Weeks	14-15 Scatter Plots 2Way Tables		8.SP.1 8.SP.2 8.SP.3 8.SP.4	

VVUHSD Math Pacing Guide

Content Area: Math Grade: Math 8 Acceler

Note: For planning purposes, not all problems need to be worked in each section/chapter. Ensure you go through the units for Carnegie in advance. Unless you have time and graphing calculators, you may want to skip the sections for programing the graphing calculators.

Useful resources: <https://emathinstruction.com/> use mostly the algebra textbook. It comes with a common core based lesson and homework. Pick and choose lessons to use in class. They are good to replace parts of Carnegie to help the students.

Tasks: <http://www.svmimac.org/mars/mars.html>; Login: Username: **svmimember2** Password: **doubles22** Password to open all pdf files: **sweet16**

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1	Review Review Integers and Order of Operations	Unit 1: Scientific Notation and Operations with Scientific Notation Priority: 8.EE.3, 8.EE.4 Go Math Module 2 <ul style="list-style-type: none">2.2 Scientific Notation Positive Powers2.3 Scientific Notation Negative Powers2.4 Operations with Scientific Notation	Unit 2: Modeling with Functions Priority:F-IF. 2, F-IF. 4, F-IF. 5, F-IF. 9, F-LE 1(a and b) F-IF. 6, F-BF. 1a Carnegie Chapter 1 - All This chapter compares/contrasts function families: linear, exponential, quadratic, piecewise, and absolute value.			Buffer	Unit 3: Linear equations and inequalities in one Variable Priority: A-REI.1, A-CED.1, A-CED. 2, A-CED.3, F-IF 2, A-REI-3.1 Carnegie Chapter 2 <ul style="list-style-type: none">2.1: #1 Analyze linear table; #2 Analyze Equations/graphs; #3 Connecting approaches: table, equation, or graph.2.2: #1 Connecting approaches of decreasing linear function; #2 (optional) Analyzing components of a linear function; #3 (optional) using technology to complete tables2.3: #1 introduces inequalities; #2 solve inequalities; #3 reversing the sign2.4: Write, Solve, and Graph simple and compound inequalities2.5:#1 if students need review definition of absolute value; #2: Only #'s 1-6; #3: Introduce applications up to pg 131 (#'s 1-4).2.6: OptionalIntroduce converting from Standard Form to Slope Intercept Form to prepare students for Unit 3.. Task: Vacations - http://www.svmimac.org/images/MARS2005-09 .pdf		
Supporting Standards		Supporting: 8.EE.1 May need to review Integer Exponents and Exponent Properties	Supporting: N-Q. 1, N-Q.2, N-Q.3, F-IF.1, F-IF.3, F-LE.3, F-LE. 5, F-IF. 7a and e, F-BF.2, F-BF.4a Note: <ul style="list-style-type: none">F-IF. 7 e technology onlyF-BF.4 a just recognize as a switch of x and y.F-BF.4 a in honors look at in detail.F-LE. 5 logarithms Honors only			Supporting: N-Q 1, 2, & 3, A-SSE 1a, A-REI 3, A-REI.6,			

			<ul style="list-style-type: none"> F-LE. 5 just explain that logarithmic and exponential are inverses (don't go into detail). 	
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Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
2	Unit 3: Linear equations and inequalities in one variable Priority: A-REI.1, A-CED.1, A-CED. 2, A-CED.3, F-IF 2, A-REI-3.1 Carnegie Chapter 2		Buffer	Unit 4: Linear equations and inequalities in two variables A-CED 2, A-CED.3, A-REI.5, A-REI.6, A-REI.11 Chapters: 6, 7 <ul style="list-style-type: none"> 6.1: #1 Writing and graphing equations, identify intersection point; #2, No solution to a system, introduces substitution method, #3 Builds on substitution method 6.2: #1 Write Equations, solve with elimination, #2 Elimination by changing coefficients, #3 Step by step elimination practice. 6.3: Solving/writing system problems in context 6.4: (optional) Compare and contrast methods 7.1: #1 introduces linear inequality; #2 line/dash, above/below, shading; #3 write inequality, complete table, graph solution, test solution points as viable/nonviable 7.2: Systems of inequalities Task: Fencing - http://www.svmimac.org/images/MARS2011-09.pdf The Trip - http://www.svmimac.org/images/MARS2010-09.pdf			Finals and projects		
Supporting Standards	Supporting: N-Q 1, 2, & 3, A-SSE 1a, A-REI 3, A-REI.6,			Supporting: 8.EE.8a, 8b, 8c A-REI.10, A-REI.11, A-REI.12, ACED.4			Note: It is highly expected that chapter 2 will take more time than listed.		

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
3	Unit 5: Transformations and Pythagorean Theorem Priority: 8.G.1, 8.G.2, 8.G.3, 8.G.4 8.G.6, 8.G.7, 8.G.8 Go Math Modules: 9, 10, 12			Unit 6: Coordinate Geometry Priority: G-GPE.4, G-GPE.5 Carnegie Ch. 12 Teach: 12.1, 12.2, & 12.4 Honors may use 12.3 if time permits <ul style="list-style-type: none">12.1: #1 Introduces distance formula, #2 Transformation, rigid motion, #3 Use construction tools to translate a line segment12.2: #1 Builds concept of midpoint, #2 & #3 Extends practice with midpoint, #4 Construct midpoint using tools and patty paper12.4: #1 Define parallel & perpendicular for students: this problem introduces the concepts graphically and algebraically and introduces point-slope, (Recommend skip exercise #12), #2 Application of perpendicular, #3 Introduces horizontal and vertical slope, #4 Redundant (recommend skip for time). Task: Linear equations water park project		Unit 7: Basic Definitions and rigid motions, tools and construction G-CO.5, G-CO. 7, G-CO. 8 Carnegie Ch. 13 <ul style="list-style-type: none">13.1 and 13.2 were taught in Unit 5 of the pacing.13.3: #1 Use straw, spaghetti, or patty paper to save time for constructions.#2 & 3 (optional) Shows that Translations and Reflections preserves shape and size13.4 #1 Read intro for key definitions (Recommend Skip Construction for time), #2 Use Rotations to support ASA, #3 Marking Congruence13.5: #1 (optional) Construction, Key definitions: ASA, Included Side; #2 Identify transformations and verify congruency through ASA;13.6: #1 (optional) Construction, Key definitions: AAS, Non-included Side; #2 (optional) Use reflection and verify congruency through AAS; #3 Verify congruency and congruent parts with ASA and AAS. Task: Congruent Triangles:			

		https://drive.google.com/drive/folders/0B35D-bSoDrz-MIRTSU1CUG5kdHc (read through and use the parts that you feel are necessary for your class).			http://svmimac.org/images/MARS2000-10.pdf Co-Ordinates- http://svmimac.org/images/MARS2000-09.pdf				
Supporting Standards		<p>Supporting: G-GPE.7</p> <ul style="list-style-type: none">Here's a resource to teach this standard right after 12.1. <p>(This unit was swapped out with the beginning unit of Integrated 2. The integrated 2 teachers need to teach G-CO.9, G-CO.10 and G-CO.11.)</p>			Supporting: G-CO.1, G-CO.2, G-CO. 3, G-CO. 4, G-CO.6, G-CO.12, G-CO.13				
Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
4	<p>Unit 8: Statistics 8.SP.4, S-ID.2, S-ID.5, S-ID.9 Go Math Module 15, Carnegie Ch. 8, 9 and 10 Use the following link to support teacher and student understanding of Unit 7. Scroll down to find each standard (contains vocabulary, lesson, and task). If time does not permit, skip chapter 9 except 9.5. http://www.sbcusd.com/DocumentCenter/View/117870</p> <ul style="list-style-type: none">Go Math Lesson 15.1 Two-Way Frequency TablesGo Math Lesson 15.2 Two-Way Relative Frequency Tables8.1: #1 Dot plots, #2 Box & whisker, #3 Histograms8.2: Explores mean and median, entire section is recommended8.3: #1 More Box & Whisker plots, #2 Deals with outliers, #3 (optional summary)8.4: #1 (optional), #2 Standard deviation (w/ graphing calc), #3 Additional practice w/ stand. Dev. , #4 Standard Deviation 68, 95, 99				<p>Unit 9: Sequences and Exponential Functions F-BF.1a, F-LE.1 a,b,c; F-LE.2, F-BF.2, F-BF.3 Chapters: 4, 5</p> <ul style="list-style-type: none">4.1: #1 Introduces sequence; #2 Organizes the sequences from #1. (Suggestion: Group students to complete one sequence per group, fill out chart in #2 as a class when groups present); #3 (optional) Key terms: finite, infinite4.2: #1 Complete sequences, describe patterns; #2 Determine arithmetic/geometric, identify common difference/ratio4.3: #1 Explicit - arithmetic formula; #2 Explicit - geometric formula; #3 Recursive formulas (calculator portion optional)4.4: #1 Complete tables, graph arithmetic and geometric sequences;			Finals and projects	

	<ul style="list-style-type: none"> • 8.5: (optional) • 10.1: Analyzing Data Sets. Problems 1, 2, 3 (optional) <ul style="list-style-type: none"> ◦ Before teaching chapter 10, take a day review how to convert from a fraction to a decimal, and decimal to a percent. • 10.2: Relative Frequency Distribution skip 591, page 594 skip question 2. May want to divide class in groups to complete the table. • 10.3: Relative Frequency Conditional Distribution. Problem 1. May want to divide class in groups to complete the table.(pg. 596, use question 3 as a classroom discussion) • 10.4: Drawing Conclusions from Data. Complete all • 9.1: Skip (Least squares regression) • 9.2: #1 Correlation (-/+ or none) (focus on questions 1-2 pgs 534-535), #2 Linear Regression • 9.3: #1 Introduces residuals and how to interpret them, #2 Provides additional practice (optional), Recommend using Talk the Talk at the end. Highly recommend utilizing Skills Practice #'s 7-12 as a class for this section. Suggest to use a gallery walk as an in class activity for 7-12. • 9.4: (optional) This section provides extra practice using residual plots. • 9.5: Causation versus Correlation Do all of the problems <p>Task: Archery- http://www.insidemathematics.org/assets/common-core-math-tasks/archery.pdf Suzi's Company- http://www.insidemathematics.org/assets/common-core-math-tasks/suzi's%20company.pdf Through the Grapevine- http://www.insidemathematics.org/assets/problems-of-the-month/through%20the%20grapevine.pdf Heart Beat- http://svmimac.org/images/MARS1999-09.pdf</p>	<p>#2 (optional) Graphic organizer for graphs</p> <ul style="list-style-type: none"> • 4.5: #1 Converting arithmetic sequences to function notation (slope-intercept form); #2 Converting geometric sequences to function notation • 5.1: Problems illustrate how simple and compound interest formulas are derived. Formulas are essential, alternate resources may be preferred to teach these concepts. • 5.2: #1 Increasing/decreasing exponential; #2 graphing exponentials; #3 Connecting function, table, graph • 5.3: #1 Vertical Translations; #2 Horizontal Translations; #3 (optional) • 5.4: #1 Reflections, #2 (optional), #3 Write/graph functions given transformations • 5.5: (optional) Exponent Rules • 5.6: (optional) Recommended for honors <p>Task: Apartment Numbers- http://svmimac.org/images/MARS2000-08.pdf (arithmetic) Honeycomb - http://beautifulhighschoolmath.blogspot.com/2015/09/algebra-one-sequences-honeycomb.html (arithmetic) Answer key: https://jackiebroomall.wikispaces.com/file/view/1.7.2+Honeycombs+in+Industry+KEY.pdf Project math- http://www.projectmaths.ie/documents/T%26L/GeometricSequences.pdf (geometric, be sure to</p>		
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		look through this and pick the problems you want). Representing linear and exponential growth- http://map.mathshell.org/download.php?fileid=1732 (use after 5.1 or instead of 5.1)		
Supporting Standards	Supporting: S-ID.1, S-ID.3, S-ID.6, S-ID.7, S-ID.8, S-ID.9	Supporting: A-SSE.1 a,b, A-CED.1, A-REI.3, A-REI.10, A-REI.11, F-IF.3, F-IF.4,F-IF.6, F-LE.3, F-LE.5		

VVUHSD Integrated Math 1 Pacing Guide 2020-21

Priority Standards from Achieve the Core are in blue; Reduced Standards are in black, Red Standards are eliminated.

	Module 1	Learning Intentions	CCSS	Pacing
1 st Nine Weeks	Topic 1: Quantities and Relationships		F-IF.1, F-IF.2, F-IF.4 F-IF.5 F-IF.6 F-BF.1a	12-15 Days
	Topic 2: Sequences	Focus on Arithmetic Sequencing & Relationships, will delay the focus of geometric sequencing in prior to / in combination with exponential functions	F-BF.1a F-BF-2	7-10 Days
	Topic 3: Linear Regressions (Note only find line of best no regression)	Focus on Line of Best fit only - relationships and estimation, understanding graphical behaviors	S-ID.7	3-5 days
	Module 2	Learning Intentions	CCSS	Pacing
2 nd Nine Weeks	Building Quantitative Reasoning	Developing an understanding of how to complete a quantitative analysis which includes identifying quantities, their values, and the relationships between those quantities to help solve problems. <i>In the classroom:</i> focusing on 1-2 word problems, one day per week, & helping students decontextualize those problems. <i>"Capturing Quantities"</i>	HSN.Q.A.1 HSN.Q.A.2 HSN.Q.A.3	1 day per week for Qtr. 2
	Topic 1: Linear Functions		A-CED.1 A-CED.2 A-CED.3 F-IF 2 A-REI-3.1	
	Topic 2: Solving Linear Equations and Inequalities		A-CED.2 A-CED.3 A-REI.5	

			A-REI.6 A-REI.11	
	Topic 3: Systems of Equations and Inequalities		A-CED.2 A-CED.3 A-REI.5 A-REI.6 A-REI.11	
	Module 3 & 4	Learning Intentions	CCSS	Pacing
3 rd Nine Weeks	<i>Continuing</i> Topic 3: Systems of Equations and Inequalities		A-CED.2 A-CED.3 A-REI.5 A-REI.6 A-REI.11	
	Mod 3-Topic 1: Introduction to Exponential Functions		F-BF.1a, F-LE.1 a,b,c F-BF.2, F-BF.3	
	Mod 3-Topic 2: Using Exponential Equations		F-BF.1a, F-LE.1 a,b,c F-BF.2, F-BF.3	
	Mod 4-Topic 1: One-Variable Statistics		S-ID.1 S-ID.2 S-ID.3	Unit planning template does not reflect the elimination of S-ID.1
	Mod. 4-Topic 2: Two-Variable Statistics		S-ID.5	
	Module 5	Learning Intentions	CCSS	Pacing

4 th Nine Weeks	Topic 1: Constructions		G-GPE.4 G-GPE.5 G-CO.5 G-CO.7 G-CO.8	
	MODULE 1 (REVISITED) Topic 4: Shapes on a Coordinate Plane		G-GPE.4, G-GPE.5	
	Topic 2: Rigid Motions		G-GPE.4 G-GPE.5	
	Topic 3: Congruence through Transformations		G-CO.5 G-CO.7 G-CO.8	

Integrated 1A

1st Qtr

VVUHSD Integrated Math 1A Scope & Sequence

Note: For planning purposes, not all problems need to be worked in each section/chapter. Ensure you go through the units for Carnegie in advance. Unless you have time and graphing calculators, you may want to skip the sections for programing the graphing calculators.

Useful resources: <https://emathinstruction.com/> use mostly the algebra textbook. It comes with a common core based lesson and homework. Pick and choose lessons to use in class. They are good to replace parts of Carnegie to help the students.

Carnegie is ordered by Module > Topic > Lesson For example: 1.1.1 = Module 1, Topic 1, Lesson 1

Week:	1	2	3	4	5	6	7	8	9
1st Qtr/ Module	Module 0: Basics		Module 1: Searching for Patterns						Catch-Up Week
Topic	Review		Topic 1: Quantities & Relationships			Topic 2: Sequences			
Lessons	Establish classroom procedures...		1.1.1- A Picture is Worth a Thousand Words			1.2.1- Is There a Pattern Here?			
Standards			N.Q.1, N.Q.2, A.REI.10, F.IF.1, F.IF.4			F.IF.1, F.IF.3, F.IF.4, F.IF.5, F.BF.1a			
	Get your books								
			Pre Test			Pre Test			
	Review: Place values in context; concepts of multiplications and division using place value (area model); Integers (recommendation: play dice/playing cards); Fractions and Fraction strips.		1.1.2- A Sort of Sorts			1.2.2- The Password is Operations			
			F.IF.4			F.IF.4, F.IF.5, F.BF.1a, F.BF.2			

Standards	F.IF.4, F.BF.1a, F.BF.2	N.Q.3, F.BF.2, S.ID.6, S.ID.6b, S.ID.6c				F.IF.1, F.IF.2, F.IF.3, F.IF.6, F.LE.1a, F.LE.1b, F.LE.2, S.ID.6a	
	1.2.4- 3 Pegs, N Discs	Pre Test				Pre Test	
	F.IF.4, F.BF.1a, F.BF.2						
		1.3.2 Gotta Keep it Correlatin'				2.1.2- Fun With Functions, Linear Ones	
	Post Test	N.Q.3, S.ID.6, S.ID.6b, S.ID.6c, S.ID.7, S.ID.8, S.ID.9				N.Q.1, A.SSE.1a, A.CED.1, A.REI.10, F.IF.2, F.IF.4, F.BF.3, F.LE.1b, F.LE.2, S.ID.6b	
	Tasks:	1.3.3 The Residual Effect				2.1.3- Move It!	
	Apartment Numbers- (arithmetic) (Rubric)	F.BF.2, S.ID.5, S.ID.6, S.ID.6a, S.ID.6b, S.ID.7, S.ID.8				F.IF.4, F.IF. 7a, F.BF.3, F.LE.1b, F.LE.2, G.GPE.5, S.ID.6a, S.ID.8	
	Honeycomb - (arithmetic) (Rubric)						
	Project math (geometric, be sure to look through this and pick the problems you want).	1.3.4 To Fit or Not to Fit? That is the Question?					
	Growing Vines (Rubric) (arithmetic and geometric)	N.Q.3, F.BF.1a, S.ID.5, S.ID.6, S.ID.6a, S.ID.6b					

			Post Test						
			Tasks:						
			Snakes (Rubric)						
			Pizza Sales (Rubric)						
			Machines (Rubric)						
			Optional Activity (Rubric)						
3rd Qtr									
Week:	1	2	3	4	5	6	7	8	9
3rd Qtr/ Module	Module 2: Exploring Constant Change								Catch-Up Week
Topic	Topic 1: Linear Functions		Topic 2: Solving Linear Equations and Inequalities			Topic 3: Systems of Equations and Inequalities			
Lessons	2.1.4- Amirite		2.2.1- Strike a Balance			2.3.1- Double the Fun			
Standards	F.BF.1a, G.GPE.5, S.ID.6a, S.ID.8		A.CED.1, A.REI.1, A.REI.3, F.IF.2, F.IF.9, F.LE.2			A.CED.2, A.REI.3, A.REI.6, A.REI.10, A.REI.11, F.IF.7a, S.ID.6b			
	2.1.5- Making a Connection		Pre Test			Pre Test			
	N.Q.1, F.IF.9, F.BF.2, F.BF.3, G.GPE.5, S.ID.9								

Lessons	2.3.4- Working with Constraints	2.4.1 The Shape of Things		
Standards	A.CED.3, A.REI.3, A.REI.12, S.ID.6	A.CED.3, F.BF.3, G.GPE.4, G.GPE.7		
	2.3.5- Working the System	Pre Test		
	A.CED.3, A.CED.4, A.REI.6, A.REI.12, F.LE.2			
		2.4.2 Know it Inside Out		
	2.3.6- Take It to the Max... or Min	A.CED.3, A.CED.4, G.GPE.5, G.GPE.7		
	A.CED.2, A.CED.3, A.REI.3, A.REI.6, A.REI.11, A.REI.12, F.IF.2, S.ID.6			
		2.4.3 In All Shapes and Sizes		
	Post Test	A.CED.3, F.IF.6, G.GPE.7		
	Tasks:	Post Test		
	Alan's Equations (Rubric)			
	Calculating Calculators (Rubric)	Tasks:		

	Gym Services (Rubric)	Building a Playground (Rubric)		
	Sweatshirts (Rubric)	Go Fly a Kite (Rubric)		
	Bangin' Boomerangs (Rubric)	Water Park Project (There are nine tasks; short tasks; tasks 6, 7, and 8, you may want to give as extra credit.)		

Integrated IB

VVUHSD Integrated Math 1B Scope & Sequence									
<p>Note: For planning purposes, not all problems need to be worked in each section/chapter. Ensure you go through the units for Carnegie in advance. Unless you have time and graphing calculators, you may want to skip the sections for programming the graphing calculators.</p>									
<p>Useful resources: https://emathinstruction.com/ use mostly the algebra textbook. It comes with a common core based lesson and homework. Pick and choose lessons to use in class. They are good to replace parts of Carnegie to help the students.</p>									
Carnegie is ordered by Module > Topic > Lesson For example: 1.1.1 = Module 1, Topic 1, Lesson 1									
Week:	1	2	3	4	5	6	7	8	9

1st Qtr/ Module	Module 0: Basics		Module 3: Investigating Growth and Decay				Catch-Up Week
Topic	Review		Topic 1: Introduction to Exponential Functions				
Lessons	Establish classroom procedures...		3.1.1- Constant Ratios				
Standards			A.SSE.1a, A.REI.6, A.REI.10, F.IF.7e, F.BF.1a, F.LE.1a, F.LE.2, F.LE.5, G.GPE.7				
	Get your books						
			Pre Test				
	Review: Place values in context; concepts of multiplication and division using place value (area model); Integers (recommendation: play dice/playing cards); Fractions and Fraction strips.						
			3.1.2- To the What?				
			A.CED.1, A.REI.3, F.IF.9, F.BF.1a, F.LE.2, F.LE.5, G.GPE.7				
			3.1.3- My A, B, C, Ds				
			A.REI.3, F.IF.4, F.IF.7e, F.BF.3, G.GPE.4				
			Post Test				
			Tasks:				
			Representing linear and Exponential growth				
			Desmos.com Activity Marbleslides				
			Square Patterns (Rubric)				

2nd Qtr									
Week:	1	2	3	4	5	6	7	8	9
2nd Qtr/ Module	Module 4: Describing Distributions								Catch-Up/
Topic	Topic 1: One-Variable Statistics				Topic 2: Two-Variable Statistics				Finals!!!
Lessons	4.1.3- Daring to Compare				4.2.1- It Takes Two				
Standards	A.REI.3, S.ID.1, S.ID.2, S.ID.3				F.IF.4, S.ID.2, S.ID.3, S.ID.5				
	Post Test				Pre Test				
	Tasks:				4.2.2- Relatively Speaking				
	Archery				F.BF.3, S.ID.1, S.ID.2, S.ID.5				
	Suzi's Company								
	Through the Grapevine				4.2.3- On One Condition... or More				
					F.BF.3, S.ID.1, S.ID.2, S.ID.5				
					4.2.4- Data Jam				
					S.ID.3, S.ID.5				
					Post Test				
					Tasks:				
					Heart Beat (Rubric)				

3rd Qtr									
Week:	1	2	3	4	5	6	7	8	9
3rd Qtr/ Module	Module 5: Analyzing Geometric Functions								Catch-Up Week
Topic	Using Geometric Tools Review	Topic 1: Constructions				Topic 2: Rigid Motions on a Plane			
Lessons		5.1.1- Construction Ahead				5.2.1- Put Your Input In, Take Your Output Out			
Standards		G.CO.1, G.CO.12, G.CO.13, G.GPE.5, S.ID.5				G.CO.1, G.CO.4, G.CO.6, G.CO.12, G.GPE.5			
		Pre Test				Pre Test			
		5.1.2- Copycats				5.2.2- Bow Thai			
		G.CO.12, G.CO.13, G.GPE.7, S.ID.5				A.REI.10, G.CO.2, G.CO.4, G.CO.5, G.CO.12			
		5.1.3- A Regular Triangle				5.2.3- Staring Back at Me			
		G.CO.12, G.CO.13, S.ID.5				A.REI.3, G.CO.2, G.CO.4, G.CO.5, G.CO.12			
		Post Test				5.2.4- Turn Yourself Around			
						F.IF.6, G.CO.2, G.CO.4, G.CO.5, G.CO.12			
		Construction Project Task							
		Tasks and rubrics: https://drive.google.com/drive/u/0/folders/1nEfzmyYiwqUUTjVw6nXFyH5oO27EvxMs							

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4th Qtr Key Dates: Begins approximately the week before Spring Break.

Week:	1	2	3	4	5	6	7	8	9
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4th Qtr/ Module	Module 5: Analyzing Geometric Functions							Catch-Up/	
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Topic	Topic 2: Rigid Motions on a Plane		Topic 3: Congruence Through Transformations				Finals!!!		
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Lessons	5.2.4- Turn Yourself Around		5.3.1- The Elements						
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Standards	F.IF.6, G.CO.2, G.CO.4, G.CO.5, G.CO.12		G.CO.2, G.CO.3, G.CO.5, G.GPE.5						
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	5.2.5- OKEECHOBEE		Pre Test						
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	F.IF.4, G.CO.3, G.CO.12								
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			5.3.2- ASA, SAS, and SSS						
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	Post Test		G.CO.5, G.CO.7, G.CO.8, G.GPE.7						
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	Tasks:		5.3.3- I Never Forget a Face						
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	Desmos.com Activity: Transformation Golf: Rigid Motion		F.BF.3, G.CO.3, G.CO.6, G.CO.7						
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	Name art project:								
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	https://reliefteachingideas.com/2013/09/01/rotational-symmetry-names/								
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			Post Test						
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				G.CO. 7 alternate unit with lessons, activities and assessment: https://drive.google.com/drive/u/0/folders/1ziUiclj1hWYJL3ZoJNxKYPbyWv-oUHuk	

Integrated 1 Math - Semester 1
VVUHSD Pacing Guide 2020-2021 (updated 11-19-20)

Standards	Supporting Standards	Description	College and Career Ready Standards	Int. Math 9 Unit	V-math or curriculum	Priority 20/21	Learn Zillion
HSN.Q.A.1	4.NF, 5.NF, 6.NS, 6.RP	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	x	Unit 0: Operations with Rational Numbers	G. Fletcher-Fractions with Conceptual Understanding	x	Alg1.5.7, Alg1.5.8, Alg1.5.11
HSN.Q.A.2	4.NF, 5.NF, 6.NS, 6.RP	Define appropriate quantities for the purpose of descriptive modeling		Unit 1: Ratios and Proportions	Ratios/Proportions and Problem Solving	x	Alg1.2.1, Alg1.2.26, Alg1.4.8, Alg1.5.17
HS.N.RN.1, 2 & 3		Real Number System: rational numbers, integers, and other signed numbers		Unit 2: Rational Numbers	Integers using conceptual models		
HSA.SEE.A.1	6.EE.A.2, 7.EE.A.2	Interpret expressions with exponents	x	Unit 3: Exponents and Square Roots	Level I-Mod 3	x	Alg1.2.6, Alg1.2.23, Alg1.4.18, Alg1.5.4, Alg1.5.7, Alg1.5.17, Alg1.6.2, Alg1.6.3
HSA.CED.A.1 and CED.A.2	7.EE.B.4, 8.EE.A.2	Create equations that describe number relationships	x	Unit 4: Linear Equations	Level I-Mod 3	x	A.1: Alg1.2.20, Alg1.7.1, Alg1.7.17, Alg1.7.18. A.2: Alg1.2.1, Alg1.2.2, Alg1.2.3, Alg1.2.5, Alg1.2.6, Alg1.2.23, Alg1.5.3, Alg1.5.4, Alg1.5.5, Alg1.5.6, Alg1.5.7, Alg1.7.2

HSA.REI.A.1	6.EE.B.5, 8.EE.C.7	Understand solving equations as a process of reasoning and explaining	x	Unit 4: Linear Equations	Level I-Mod 3	Reduced	Alg. 1.2.4
HSA.REI.B.3	H.S. REI.A.1	Solve equations and inequalities in one variable	x	Unit 4: Linear Equations	Level I-Mod 3	Reduced	Alg. 1.2.4
HSF.IF.A.1, A.2, A.3,	8.F.A.1, HS.F.IF.A.1, HS.F.IF.A.2	Understand the concept of a function and function notation	x	Unit 5: Patterns as Functions	Level I-Mod 4	A.3 is reduce	
HSF.IF.B.4, B.5, B.6	8.F.B.5, HS.F.IF.A.1, HS.F.IF.A.3, 8.F.B.4	Interpret functions that arise in applications in terms of the context	x	Unit 5: Patterns as Functions	Level I-Mod 4	x	B.4: Alg1.4.1, Alg1.4.2, Alg1.4.3, Alg1.4.4, Alg1.4.5, Alg1.4.6, Alg1.4.8, Alg1.4.9, Alg1.4.11, Alg1.4.17, Alg1.4.18, Alg1.5.1, Alg1.5.2, Alg1.5.5, Alg1.5.6, Alg1.5.11, Alg1.5.12, Alg1.5.13, Alg1.5.19, Alg1.6.14, Alg1.6.17, Alg1.7.10. B.5: Alg1.4.10, Alg1.4.11, Alg1.4.12, Alg1.5.8, Alg1.5.9, Alg1.5.11, Alg1.5.19, Alg1.6.6, Alg1.6.7, Alg1.7.17 B.6: Alg1.4.7, Alg1.4.8, Alg1.4.9, Alg1.4.18, Alg1.5.10, Alg1.5.15
HSF.IF.C.7.A	HS.F.IF.A.1, HS.F.IF.A.3	Graph linear and show intercepts		Unit 5: Patterns as Functions	Brad Fulton	x	Alg1.6.6, Alg1.6.7, Alg1.6.11, Alg1.6.13, Alg1.6.14, Alg1.6.15, Alg1.6.16, Alg1.6.17, Alg1.7.20
HSF.BF.A.1a & b, BF.A.2	8.F.B.4, HS.F.IF.A.1	Build a function that models a relationship between two quantities	x	Unit 6: Building and Applying Functions	Brad Fulton	Reduced	
HSA.REI.C.5 & REI.C.6	8.EE.C.8, HS.REI.C.5	Solve systems of equations		Unit 6: Building and Applying Functions	Level I-Mod 5	x Just Graphing	C.5: Alg1.2.16 C.6: Alg1.2.12, Alg1.2.13, Alg1.2.14, Alg1.2.15, Alg1.2.16, Alg1.2.17
HSF.LE.A.1	8.F.A.3, 8.F.B.4, 8.F.B.5	Construct and compare linear, quadratic and exponential models to solve problems	x	Unit 6: Building and Applying Functions		x	A.1.a: Alg1.5.20 A.1.b: Alg1.5.20, Alg1.5.21 A.1.c: Alg1.5.11, Alg1.5.21

HSF.LE.B.5	8.EE.A.1, H.S.F.BF.B.4	Interpret expressions for functions in terms of the situation they model	x	Unit 6: Building and Applying Functions	Brad Fulton	x	Alg1.5.3, Alg1.5.4, Alg1.5.5, Alg1.5.11, Alg1.5.12, Alg1.5.13, Alg1.5.17
HS.GCO.A.2	8.F.A.1, 8.G.A.1, HS.F.IF.A.1, HS.F.IF.A.2, HS.F.IF.A.3	Experiment with transformations in the plane		Unit 7: Transformations and Congruence	Level I-Mod 6	x	8.1.2, 8.1.3, 8.1.4, 8.1.6, 8.1.11, 8.1.14, 8.3.8
HSS.ID.A.1, ID.A.2	6.SP.B.4, 6.SP.A.2, 6.SP.A.3, 6.SP.B.5, 7.SP.B.3, 7.SP.B.4	Summarize, represent and interpret data on a single count or measurement variable	x	Unit 8: Functions and Data	Level H-Mod 7	eliminated	
HSS.ID.B.5	8.SP.A.4	Summarize, represent and interpret data on two variables	x	Unit 8: Functions and Data		x	Alg1.3.1, Alg1.3.2, Alg1.3.3, Alg1.3.9

August, 2020

Monday	Tuesday	Wednesday	Thursday	Friday
		July 29 Teacher Work Day	July 30 Warm Up Overview Mini-PD 10:00-12:00 p.m. Template for Warm-Ups Google Slides for Warm Up	July 31 Teacher Work Day

Aug. 03 Distance Learning Week 1 Slides R + R = R Provide google slides for each class. Divide students into groups and assign a slide for them to work on.	04 Day 2 Slides Growth Mindset Quiz (have students report scores on Day 2 Assignment)	05 Day 3 Slides Mindset Video	06 Day 4 Slides Unit 0	07 Day 5 Slides Individual Assignment: Pix and Mix Task (located in Forms Template) Rubric
10 (Begin Warm-Ups) Multiplication chart patterns Multiplication chart	11 MDTP (12:45 - 2:50 p.m. Professional Development-ALL)	12 MDTP	13 And I'm a Mathematician Poster Mathematician slides Optional Assignment can be done as independent activity	14 Four 4's Activity Virtual 4s activity
17 3 Act Math Introduction Notice and Wonder doc (Use this to teach students how to use the recording sheet.)	18 Multiplication using the area model Activity from video Pairs Activity	19 (3 Act Math) Notes for 3-Act math Notice and Wonder doc	20 Fraction Strips Virtual Fraction Pad Fraction Strips Virtual Printable Fraction Strips FractionStripPack.pdf	21 Student Activity Comparing Fractions WS-Pg. 6 Google Slides for Pg. 6
24 IM9-Fractions PreAssessment Meaning of a Fraction Fraction Cards full size Fraction Cards Matching Google Fom Task/Quiz	25 IM9-Fractions PreAssessment	26 3-Act Math-Comparing Fractions (see slide 6) Fair Trade for a Hexagon (Page 1-2) Google Slides for Pg. 1-2 Interactive Pattern Blocks	27 Comparing Fractions Finding Fractional Part (Page 3-4) Google Slides for Pg. 3	28 King's Crown Task Digital King's Crown Task (Extra: Fraction 4 in a Row)

September 2020

Monday	Tuesday	Wednesday	Thursday	Friday
31 District Star Test	1 3-Act Math Addition/Subtraction of	2 Addition/Subtraction of Fractions using a model	3 Addition and Subtraction of Fractions Buffer Day	4 Add and Subtract Mixed Numbers Google Slides

	Fractions (Page 8) Google slides for student work Video	Google Slides for Area models Handout LearnZillion Student Video	Fractions Choices	Fraction Games 4th Grade Add Mixed Fractions Optional Assignment Optional Worksheet
7 No School	8 3-Act Multiplication	09 Models for multiplying fractions Google Slides (note these are just a guide and you must make a copy first) Learn Zillion	10 Multiplication of Fractions word problems	11 Google Slides-Instruction Illustrative Math Multiplication of Fractions with mixed numbers
14 Use 3-Read strategy for one of the following: Sharing Cookies with Fractions Sugar Bee Baker Fractions	15 3 Act Math Division	16 Division of Fractions using pattern blocks Pizza Sharing Student Assignment	17 Learn Zillion Google Slides	18 Choose which one to assign to students Division using area model Word problems
21 Teacher Choice-choose at least one to do with your class M&M fraction problem w/unit fractions Fraction Task Google Form Task Fraction Feast	22 Fractions Post-Assessment Professional Development	23 Fractions Post-Assessment	24 Capturing Quantities Introduction to the Routine	25 Capturing Quantities Day 2- Chocolate Task Share your sub
28 Optional Problems using Capturing Quantities	29 3-Act Math Professional Development	30 Unit 1 Ratios/Proportions Pre-Assessment		

October 2020

Monday	Tuesday	Wednesday	Thursday	Friday
			1 Ratios Day 2 Visual models	2 Ratios Day 3 Desmos Card Sort (Teacher Sample Lessons)
5 Ratios Day 4 Tape diagrams	6 Ratios Day 5 Online Practice	7 Ratios Day 6 Double Number lines	8 Double number lines Day 7 Double Number Lines Practice	9 Buffer Day or Quiz
12 BREAK	13 BREAK	14 BREAK	15 BREAK	16 BREAK
19 Ratio Day 8 Ratio tables Ratio Tables WS	20 Ratio Tables Desmos Activity for Ratios	21 Candy Task (SVM) See Google Form Templates for Task OR Go Formative	22 Review /Buffer	23 Ratios Post Assessment
26 Ratios Post Assessment	27 Order of Operations slides Overview Online Interactive	28 Order of Operations Task-Digital Version Mr.Naussbaum Rescue (optional)	29 Cliff Diving Task Use Go Formative or School City Pre-Assessment	30 Buffer Day or Play "24" Math-Template Make 24 Online

November 2020

Monday	Tuesday	Wednesday	Thursday	Friday
2 Unit 2 Intro to Integers	3 Introduce Zero Pairs using counters- Gizmo Zero Pairs Student Mat	4 Integer-Addition using counters (Google Slides-Day 1 & 2)	5 Desmos Activity for Integers using chips	6 Integers-Addition using number line Gizmos
9 Integers-Subtraction using counters (Google Slides) Bowling for Integers	10 Integers-subtraction using number line (pg. 8 practice) Quiz: Google Template "IM 9 Integer Addition and Subtraction"	11 No School	12 Walk the Line WS Escape the Room Worksheet	13 Multi/Div Slides Rules for Mult./Div.
16 Integers-multiplication Rules for Mult./Div. Practice pg. 53 & 54	17 Integers-division Rules for Mult./Div.	18 Integers-division Practice-pg 63 Integer Post-Assessment open until Friday, Nov. 20	19 Optional Integer Review Mixed review pg. 68 Jeopardy	20 Integer Post-Assessment Go Formative Post Task
23 THANKSGIVING BREAK	24 THANKSGIVING BREAK	25 THANKSGIVING BREAK	26 THANKSGIVING BREAK	27 THANKSGIVING BREAK

December 2020

Monday	Tuesday	Wednesday	Thursday	Friday
30 Buffer Day	1 LZ 8.4 Pre-Assessment	2 LZ 8.4.1: Number Puzzles	3 LZ 8.4.1: Number Puzzles	4 LZ 8.4.2 Keeping the Equation Balanced
7 LZ 8.4.2 Keeping the Equation Balanced	8 LZ 8.4.3: Balanced Moves	9 LZ 8.4.3: Balanced Moves	10 LZ 8.4.4: More Balanced Moves	11 LZ 8.4.4: More Balanced Moves
14 Review Final Exam on School City open Dec. 14-18, 2020	15 Final exam	16 Final exam	17 Final Exam	18 Buffer Day
21	22	23	24	25
28	29	30	31	

Integrated 1 Math - Semester 2
VVUHSD Pacing Guide 2020-2021 (updated 11-19-20)

January 2021

Monday	Tuesday	Wednesday	Thursday	Friday
				1
4 Non-Student Day IAB: Grade 7: Number System	5 Buffer Day Learn Zillion Student Directions (Thanks Joshua Silva)	6 LZ 8.1.1: Moving in the Plane	7 LZ 8.1.1: Moving in the Plane Professional Development	8 LZ 8.1.2: Naming the Moves Partner Slides from Heather S.
11 LZ 8.1.2: Naming the Moves	12 LZ 8.1.3: Grid Moves	13 LZ 8.1.3: Grid Moves	14 LZ 8.1.4: Making the Moves Go Formative Quiz	15 LZ 8.1.4: Making the Moves
18 Martin Luther King Day	19 LZ 8.1.4: Making the Moves Professional Development	20 Buffer Day	21 Desmos - Rigid Transformations	22 Desmos - Rigid Transformations
25 LZ 8.1.7: No bending or stretching	26 LZ 8.1.7: No bending or stretching	27 LZ 8.1.8: Rotation Patterns	28 LZ 8.1.8: Rotation Patterns	29 Buffer/Review

February 2021 ([Geogebra Applets](#))

Monday	Tuesday	Wednesday	Thursday	Friday
1 LZ 8.1 Mid Unit Assessment	2 Review Coordinate Plane with Nearpod Worksheet for notes or practice	3 Review Coordinate Plane with Nearpod	4 Unit 6: Slope using conceptual methods Desmos Activity	5 Slope Activity with Geoboard App (Clip art for Geoboard) Additional Virtual Geoboard
8 Slope Activity with Geoboard App (Clip art for Geoboard)	9 Desmos Slope Assignment -optional Professional Development	10 LZ 10.4 Different Slope of Different Lines	11 LZ 10.4 Different Slope of Different Lines	12 President's Holiday
15 President's Holiday	16 LZ 10.4 Different Slope of Different Lines	17 Slope Quiz from Go Formative (Make sure done by 2-22-21)	18 Desmos Activity	19 Finish Desmos or Buffer Day
22 Alg. 1.2 Check your Readiness	23 Alg. 1.2 Check your Readiness Professional Development	24 LZ Alg. 1 Extra Support 1.2.1 Expressing mathematics	25 LZ Alg. 1 Extra Support 1.2.1 Expressing mathematics	26 Desmos Activity
	Resources: Assessment Page 5-7 TaskPage 30-Sample Problems			

March 2021 ([Geogebra Alg. 1](#))

Monday	Tuesday	Wednesday	Thursday	Friday
1 LZ 1.2.1 Planning a Pizza Party	2 LZ 1.2.1 Planning a Pizza Party	3 LZ 1.2.2 Writing Equations to Model Relationships Pt. 1	4 LZ 1.2.2 Writing Equations to Model Relationships Pt. 1	5 LZ 1.2.3 Writing Equations to Model Relationships Pt.2
8 LZ 1.2.3 Writing Equations to Model Relationships Pt. 2	9 LZ 1.2.3 Writing Equations to Model Relationships Pt. 2 Professional Development	10 LZ 1.2.4 Equations and their Solutions	11 LZ 1.2.4 Equations and their Solutions	12 LearnZillion Assessment
15 LZ 1.2.5 Equations and their Graphs	16 LZ 1.2.5 Equations and their Graphs	17 District IAB "Analyze and Solve Linear Equations" (8th Grade)	18 District IAB "Analyze and Solve Linear Equations" (8th Grade)	19 Buffer
22 LZ 1.2.12 Writing and Graphing Systems of Linear Equations	23 LZ 1.2.12 Writing and Graphing Systems of Linear Equations	24 Systems Tasks Folder	25 Systems Tasks Folder	26 Buffer
29 Spring Break	30 Spring Break	31 Spring Break		

April 2021

Monday	Tuesday	Wednesday	Thursday	Friday
			1 Spring Break	2 Spring Break
5 Unit 6: Linear Functions School City IM9 Functions PreAssessment Or NearPod -What are functions	6 School City Functions PreAssessment (Please make sure to do the pre-assessment before beginning the unit.) Professional Development	7 Introduction to Functions	8 Introduction to Functions	9 LZ 1.4.2 Function Notation
12 LZ 1.4.2 Function Notation (see Friday-4-09)	13 Desmos Activity	14 LZ 1.4.3 Interpreting and Using Function Notation (note: lesson needs to be adjusted for one day)	15 LZ 1.4.4 Using Function Notation to Describe Rules Pt. 1	16 LZ 1.4.4 Using Function Notation to Describe Rules Pt. 1
19 LZ 1.4.5 Using Function Notation to Describe Rules Pt. 2	20 LZ 1.4.5 Using Function Notation to Describe Rules Pt. 2	21 Assessment or Task TBD	22 LZ 1.4.6 Features of a Graph	23 LZ 1.4.6 Features of a Graph
26 LZ 1.4.7 Using Graphs to Find Average Rate of Change	27 LZ 1.4.7 Using Graphs to Find Average Rate of Change	28 LZ 1.4.8 Interpreting and Creating Graphs	29 LZ 1.4.8 Interpreting and Creating Graphs	30 Modeling Giving Bonuses

May 2021

Monday	Tuesday	Wednesday	Thursday	Friday
3 Modeling Giving Bonuses	4 LZ 1.4.9 Comparing Graphs	5 LZ 1.4.9 Comparing Graphs	6 LZ 1.4.10 Domain and Range Pt. 1	7 LZ 1.4.10 Domain and Range Pt. 1
10 LZ 1.4.11 Domain and Range Pt. 2	11 LZ 1.4.11 Domain and Range Pt. 2	12	13 Final Exam Review	14 Final Exam Review
17 Finals Week	18 s	18	20	21
24 Last Day of School	25	27	21	28

VVUHSD Math Pacing Guide

Content Area: Math Grade: Integrated 1

Note: For planning purposes, not all problems need to be worked in each section/chapter. Ensure you go through the units for Carnegie in advance. Unless you have time and graphing calculators, you may want to skip the sections for programming the graphing calculators.

Useful resources: <https://emathinstruction.com/> use mostly the algebra textbook. It comes with a common core based lesson and homework. Pick and choose lessons to use in class. They are good to replace parts of Carnegie to help the students.

Tasks: <http://www.svmimac.org/mars/mars.html>; Login: Username: **svmimember2** Password: **doubles22** Password to open all pdf files: **sweet16**

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1	Review Integers And MDTP HS Readiness Test	Review Order of operations or solving equations	Unit 1: Modeling with Functions Priority: F-IF. 2, F-IF. 4, F-IF. 5, F-IF. 9, F-LE 1(a and b) F-IF. 6, F-BF. 1a Carnegie Chapter 1 - All This chapter compares/contrasts function families: linear, exponential, quadratic, piecewise, and absolute value.			Buffer	Unit 2: Linear equations and inequalities in one Variable Priority: A-REI.1, A-CED.1, A-CED. 2, A-CED.3, F-IF 2, A-REI-3.1 Carnegie Chapter 2 <ul style="list-style-type: none"> 2.1: #1 Analyze linear table; #2 Analyze Equations/graphs; #3 Connecting approaches: table, equation, or graph. 2.2: #1 Connecting approaches of decreasing linear function; #2 (optional) Analyzing components of a linear function; #3 (optional) using technology to complete tables 2.3: #1 introduces inequalities; #2 solve inequalities; #3 reversing the sign 2.4: Write, Solve, and Graph simple and compound inequalities 2.5: #1 if students need review definition of absolute value; #2: Only #'s 1-6; #3: Introduce applications up to pg 131 (#'s 1-4). 2.6: Optional Introduce converting from Standard Form to Slope Intercept Form to prepare students for Unit 3.. Task: Vacations - http://www.svmimac.org/images/MARS2005-09.pdf		
Supporting Standards			Supporting: N-Q. 1, N-Q.2, N-Q.3, F-IF.1, F-IF.3, F-LE.3, F-LE. 5, F-IF. 7a and e, F-BF.2, F-BF.4a Note: <ul style="list-style-type: none"> F-IF. 7 e technology only F-BF.4 a just recognize as a switch of x and y. F-BF.4 a in honors look at in detail. F-LE. 5 logarithms Honors only 				Supporting: N-Q 1, 2, & 3, A-SSE 1a, A-REI 3, A-REI.6,		

			<ul style="list-style-type: none"> F-LE. 5 just explain that logarithmic and exponential are inverses (don't go into detail). 	
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Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
2	Unit 2: Linear equations and inequalities in one variable Priority: A-REI.1, A-CED.1, A-CED. 2, A-CED.3, F-IF 2, A-REI-3.1 Carnegie Chapter 2		Buffer	Unit 3: Linear equations and inequalities in two variables A-CED 2, A-CED.3, A-REI.5, A-REI.6, A-REI.11 Chapters: 6, 7 <ul style="list-style-type: none"> 6.1: #1 Writing and graphing equations, identify intersection point; #2, No solution to a system, introduces substitution method, #3 Builds on substitution method 6.2: #1 Write Equations, solve with elimination, #2 Elimination by changing coefficients, #3 Step by step elimination practice. 6.3: Solving/writing system problems in context 6.4: (optional) Compare and contrast methods 7.1: #1 introduces linear inequality; #2 line/dash, above/below, shading; #3 write inequality, complete table, graph solution, test solution points as viable/nonviable 7.2: Systems of inequalities Task: Fencing - http://www.svmimac.org/images/MARS2011-09.pdf The Trip - http://www.svmimac.org/images/MARS2010-09.pdf			Finals and projects		

Supporting Standards	Supporting: N-Q 1, 2, & 3, A-SSE 1a, A-REI 3, A-REI.6,			Supporting: A-REI.10, A-REI.11, A-REI.12, ACED.4				Note: It is highly expected that chapter 2 will take more time than listed.	
Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
3	Unit 4: Sequences and Exponential Functions F-BF.1a, F-LE.1 a,b,c; F-LE.2, F-BF.2, F-BF.3 Chapters: 4, 5 <ul style="list-style-type: none"> 4.1: #1 Introduces sequence; #2 Organizes the sequences from #1. (Suggestion: Group students to complete one sequence per group, fill out chart in #2 as a class when groups present); #3 (optional) Key terms: finite, infinite 4.2: #1 Complete sequences, describe patterns; #2 Determine arithmetic/geometric, identify common difference/ratio 4.3: #1 Explicit - arithmetic formula; #2 Explicit - geometric formula; #3 Recursive formulas (calculator portion optional) 4.4: #1 Complete tables, graph arithmetic and geometric sequences; #2 (optional) Graphic organizer for graphs 4.5: #1 Converting arithmetic sequences to function notation (slope-intercept form); #2 Converting geometric sequences to function notation 5.1: Problems illustrate how simple and compound interest formulas are derived. Formulas are essential, alternate resources may be preferred to teach these concepts. 			Unit 5: Coordinate Geometry Priority: G-GPE.4, G-GPE.5 Carnegie Ch. 12 Teach: 12.1, 12.2, & 12.4 Honors may use 12.3 if time permits <ul style="list-style-type: none"> 12.1: #1 Introduces distance formula, #2 Transformation, rigid motion, #3 Use construction tools to translate a line segment 12.2: #1 Builds concept of midpoint, #2 & #3 Extends practice with midpoint, #4 Construct midpoint using tools and patty paper 12.4: #1 Define parallel & perpendicular for students: this problem introduces the concepts graphically and algebraically and introduces point-slope, (Recommend skip exercise #12), #2 Application of perpendicular, #3 Introduces horizontal and vertical slope, #4 Redundant (recommend skip for time). Task: Linear equations water park project https://drive.google.com/drive/folders/0B35D-bSoDrz-MlRTSU1CUG5kdHc (read through and use the parts that you feel are necessary for your class).				Unit 6: Basic Definitions and rigid motions, tools and construction G-CO.5, G-CO. 7, G-CO. 8 Carnegie Ch. 13 <ul style="list-style-type: none"> 13.1: #1 Translations (see page 658 for definitions of transformation, rigid motion, translation, image and pre-image) , #2 Rotations, #3 Reflections (A key understanding: Rigid Motions preserves shape and size). 13.2: (Review Pythagorean Theorem) #1 Understanding Congruence; #2 Writing Congruence Statements 13.3: #1 Use straw, spaghetti, or patty 	

	<ul style="list-style-type: none"> • 5.2: #1 Increasing/decreasing exponential; #2 graphing exponentials; #3 Connecting function, table, graph • 5.3: #1 Vertical Translations; #2 Horizontal Translations; #3 (optional) • 5.4: #1 Reflections, #2 (optional), #3 Write/graph functions given transformations • 5.5: (optional) Exponent Rules • 5.6: (optional) Recommended for honors <p>Task: Apartment Numbers- http://svmimac.org/images/MARS2000-08.pdf (arithmetic) Honeycomb - http://beautifulhighschoolmath.blogspot.com/2015/09/algebra-one-sequences-honeycomb.html (arithmetic) Answer key: https://jackiebroomall.wikispaces.com/file/view/1.7.2+Honeycombs+in+Industry+KEY.pdf Project math- http://www.projectmaths.ie/documents/T%26L/GeometricSequences.pdf (geometric, be sure to look through this and pick the problems you want). Representing linear and exponential growth- http://map.mathshell.org/download.php?fileid=1732 (use after 5.1 or instead of 5.1)</p>		<p>paper to save time for constructions.#2 & 3 (optional) Shows that Translations and Reflections preserves shape and size</p> <ul style="list-style-type: none"> • 13.4 #1 Read intro for key definitions (Recommend Skip Construction for time), #2 Use Rotations to support ASA, #3 Marking Congruence • 13.5: #1 (optional) Construction, Key definitions: ASA, Included Side; #2 Identify transformations and verify congruency through ASA; • 13.6: #1 (optional) Construction, Key definitions: AAS, Non-included Side; #2 (optional) Use reflection and verify congruency through AAS; #3 Verify congruency and congruent parts with ASA and AAS. <p>Task: Congruent Triangles: http://svmimac.org/images/MARS2000-10.pdf Co-Ordinates-</p>
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							http://svmimac.org/images/MARS2000-09.pdf		
Supporting Standards	Supporting: A-SSE.1 a,b, A-CED.1, A-REI.3, A-REI.10, A-REI.11, F-IF.3, F-IF.4,F-IF.6, F-LE.3, F-LE.5			Supporting: G-GPE.7 <ul style="list-style-type: none">Here's a resource to teach this standard right after 12.1. G-CO.9, G-CO.10 and G-CO.11			Supporting: G-CO.1, G-CO.2, G-CO. 3, G-CO. 4, G-CO.6, G-CO.12, G-CO.13		
Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
4	Unit 6: Basic Definitions and rigid motions, tools and construction G-CO.5, G-CO. 7, G-CO. 8	Unit 7: Statistics S-ID.2, S-ID.5, S-ID.9 Carnegie Ch. 8, 9 and 10 Use the following link to support teacher and student understanding of Unit 7. Scroll down to find each standard (contains vocabulary, lesson, and task). If time does not permit, skip chapter 9 except 9.5. http://www.sbcusd.com/DocumentCenter/View/117870 <ul style="list-style-type: none">8.1: #1 Dot plots, #2 Box & whisker, #3 Histograms8.2: Explores mean and median, entire section is recommended8.3: #1 More Box & Whisker plots, #2 Deals with outliers, #3 (optional summary)8.4: #1 (optional), #2 Standard deviation (w/ graphing calc), #3 Additional practice w/ stand. Dev. , #4 Standard Deviation 68, 95, 998.5: (optional)10.1: Analyzing Data Sets. Problems 1, 2, 3 (optional)<ul style="list-style-type: none">Before teaching chapter 10, take a day review how to convert from a fraction to a decimal, and decimal to a percent.10.2: Relative Frequency Distribution skip 591, page 594 skip question 2. May want to divide class in groups to complete the table.				Unit 8: Laws of Exponents and Radicals N-RN.1, N-RN.2, N-RN.3		Review for Finals	Finals and projects

		<ul style="list-style-type: none"> • 10.3: Relative Frequency Conditional Distribution. Problem 1. May want to divide class in groups to complete the table.(pg. 596, use question 3 as a classroom discussion) • 10.4: Drawing Conclusions from Data. Complete all • 9.1: Skip (Least squares regression) • 9.2: #1 Correlation (-/+ or none) (focus on questions 1-2 pgs 534-535), #2 Linear Regression • 9.3: #1 Introduces residuals and how to interpret them, #2 Provides additional practice (optional), Recommend using Talk the Talk at the end. Highly recommend utilizing Skills Practice #'s 7-12 as a class for this section. Suggest to use a gallery walk as an in class activity for 7-12. • 9.4: (optional) This section provides extra practice using residual plots. • 9.5: Causation versus Correlation Do all of the problems <p>Task: Archery- http://www.insidemathematics.org/assets/common-core-math-tasks/archery.pdf</p> <p>Suzi's Company- http://www.insidemathematics.org/assets/common-core-math-tasks/suzi's%20company.pdf</p> <p>Through the Grapevine- http://www.insidemathematics.org/assets/problems-of-the-month/through%20the%20grapevine.pdf</p> <p>Heart Beat- http://svmimac.org/images/MARS1999-09.pdf</p>			
Supporting Standards		S-ID.1, S-ID.3, S-ID.6, S-ID.7, S-ID.8, S-ID.9			

VVUHSD Integrated Math II Pacing Guide 2020-21

Priority Standards from Achieve the Core are in blue; Reduced Standards are in black, Red Standards are eliminated, not part of CCSS for this course

	Module 1	Learning Intentions	CCSS	Pacing
1 st Nine Weeks	Review			5-10 days
	Topic 1: Composing and Decomposing Shapes	<p>Learning Intention 1: Proves theorems about lines and angles. (G-CO.9)</p> <ul style="list-style-type: none"> A. Uses composition/decomposition of circles and/or polygons to observe relationships between lines and angles. B. Makes and tests conjectures about lines and angles based on observed relationships. C. Moves from conjecturing toward writing formal proofs about lines and angles. <p>Learning Intention 2: Prove theorems about triangles. (G-CO-10)</p> <ul style="list-style-type: none"> A. Uses composition/decomposition and characteristics of circles and/or polygons to highlight relationships. B. Makes and tests conjectures about angles and triangles based on observed relationships. C. Moves from conjecturing toward writing formal proofs about angles and triangles. <p>Learning Intention 3: Proves theorems about parallelograms. (G-CO.11)</p> <ul style="list-style-type: none"> A. Uses composition/decomposition and characteristics of polygons to make and test conjectures about parallelograms. B. Identifies relationships between sides, angles and diagonals of parallelograms. C. Moves from conjecturing toward writing formal proofs about parallelograms. 	<p>G-CO.9, G-CO.10, G-CO.11, G-C.1, G-C.3 G-C.4</p>	5-10 days
	Topic 2: Justifying Line and Angle Relationships	<p>Learning Intention 1: Proves theorems about lines and angles. (G-CO.9 & 11)</p> <ul style="list-style-type: none"> A. Uses postulates as building blocks of proof. B. Applies real number properties to angle measures, line segments and distances. C. Uses definitions, properties and postulates to construct a formal proof. D. Prove theorems about lines and angles: 	<p>G-CO.9, G-CO.10, G-CO.11, G-C.1, G-C.3 G-C.4</p>	5-10 days

		<ul style="list-style-type: none"> a. Students can prove the Corresponding angle theorem and its converse. b. Students can prove the Same Side Interior/Exterior Angle Theorems c. Students can prove the Alternate Interior/Exterior Angle Theorem and its converse. d. Students can prove the Perpendicular/Parallel Line theorem. <p>Learning Intention 2: Prove theorems about triangles. (G-CO-10)</p> <ul style="list-style-type: none"> A. Students can prove the interior angles of a triangle sum to 180. B. Students can prove that the base angles of an isosceles triangle are congruent. 		
	Topic 3: Using Congruence Theorems	<p>Learning Intentions: G-CO 9: Prove theorems about lines and angles.</p> <ul style="list-style-type: none"> A. Students can prove vertical angles are congruent. B. Students can use the concepts of parallel lines to prove: <ul style="list-style-type: none"> a. Alternate interior angles are congruent. b. Corresponding angles are congruent. C. Students can prove that a points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints. <p>G-SRT 5: Solve problems using congruence and similarity criteria for triangles</p> <ul style="list-style-type: none"> A. Students understand that there is a connection between Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures. <p>Reduced: G-CO 10 Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180°; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.</p> <p>G-CO 11 11. Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.</p> <p>G-C2</p>	<p>G-CO.9, G-CO.10, G-CO.11, G-C.1, G-C.2 G-C.3 G-C.4 G-SRT 5</p>	5-10 days

		2. Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.		
	Module 2	Learning Intentions	CCSS	Pacing
2nd Nine Weeks	<u>Topic 1: Similarity</u> (need to specify SMP)	<p>Learning Intentions: G-CO 9: Prove theorems about lines and angles.</p> <p>A. Students will prove similar triangles by listing congruent angles and proportional sides.</p> <p>Learning Intentions: G-SRT 1a & 1b Find scale factors and ratios that coincide with a dilation to create similar figures</p> <p>A. Students are able to apply the properties of a dilation given a center and a scale factor.</p> <p>B. Students recognize that corresponding sides run parallel to each other.</p> <p>C. Students recognize that ratios greater than one will result in an enlargement and that ratios less than one are a reduction.</p> <p>D. Students recognize that the dilation of a line will be parallel to the original line (when not through the center).</p> <p>Learning Intentions: G-SRT 2 Use similarity transformations to determine if 2 triangles are similar.</p> <p>A. Students can verify that 2 triangles are similar if their corresponding angles are congruent.</p> <p>B. Students can verify that 2 triangles are similar if all sides are proportional.</p> <p>Learning Intentions: G-SRT 3 Establish AA Theorem for 2 triangles similar.</p> <p>A. Given a triangle students are able to create a similar triangle (using technology).</p> <p>B. Students discover AA similarity using Triangle Angle Sum Theorem</p> <p>Learning Intentions: G-SRT 4 Understanding the properties of right triangles and parallel lines.</p> <p>A. Students can apply the Triangle Proportionality Theorem to solve problems.</p> <p>B. Students use Triangle Similarity to prove the Pythagorean Theorem. (Avoid using the Geometric Mean)</p> <p>Learning Intentions: G-SRT 5: Solve problems using congruence and similarity criteria for triangles</p>	<p>G-CO.9 G-SRT.1a G-SRT.1b G-SRT.2, G-SRT.3, G-SRT.4, G-SRT.5, G-PE.6</p>	12-13 days

		A. Students can apply knowledge of congruence and similarity in triangles to prove relationships in figures and solve problems.		
	<u>Topic 2: Trigonometry</u>	<p>Learning Intention 1(G-SRT.6): Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.</p> <p>A. Students can identify the reference angle in a triangle.</p> <p>B. Students can identify the opposite side, adjacent side, and hypotenuse given a reference angle.</p> <p>C. Students can identify that two triangles are similar using the same reference angle and side ratios.</p> <p>Learning Intention 2(G-SRT.7): Explain and use the relationship between the sine and cosine of complementary angles.</p> <p>A. Students can explain what complementary angles are.</p> <p>B. Students can explain why the sine of an angle is the cosine of its complement.</p> <p>Learning Intention 3(G-SRT.8): Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems</p> <p>A. Students can identify the trigonometric ratios of Sine, Cosine, and Tangent.</p> <p>B. Students can accurately use their calculator to solve for a trigonometric value.</p> <p>a. Correct Mode (Deg.)</p> <p>b. Inverse Functions (2nd button)</p> <p>c. Order of Operations</p> <p>C. Students can use the trigonometric ratios to solve for a missing side of a right triangle.</p> <p>a. Isolate the variable.</p> <p>b. Choose the correct Trig. Function and corresponding ratio.</p> <p>D. Students can solve for the third side of a right triangle given the other two sides using the Pythagorean Theorem.</p> <p>E. Students can use the inverse Trigonometric Functions to solve for an angle given 2 sides of a right triangle.</p> <p>Learning Intention 4(G-SRT.5): Use congruence and similarity criteria for triangles to solve problems.</p> <p>A. Students can prove that two triangles are similar using the Trigonometric Ratios.</p>	G-SRT.5, G-SRT. 6 G-SRT.7 G.SRT. 8, G-GMD.1,	25-28 days
		Learning Intention 1 (G-C.5): Use similarity to define arc length and area of a sector.	G-C.1 G-C.5	5-10 days

	Topic 3: Circles and Volume (started, not done)	A. Calculate arc length. B. Calculate area of sector. Learning Intention 2 (G-GMD.3): Use volume formulas for cylinders, pyramids, cones and spheres to solve problems. A. Calculate volume of cylinders, pyramids, cones and spheres. B. Calculate missing dimension given the volume.	G-GMD.1 G-GMD.3 G-MG.1 G-MG.2	
	Modules 3 & 4	Learning Intentions	CCSS	Pacing
	Mod. 3-Topic 3:Introduction to Quadratics	Learning Intention 1. (A-SSE.3a) Identify General Form and Factored Form of a Quadratic. A. Students can explain the difference between general form and factored form. Learning Intention 2. (F-IF.4) Interpreting key characteristics of a given graph of a quadratic function. A. Students can identify intercepts, maxima/minima, axis of symmetry, and concavity. B. Students can explain how intercepts, minima/maxima, axis of symmetry, and concavity influence the shape of the graph. C. Students can sketch a function given the key characteristics: intercepts, maxima/minima, axis of symmetry, and concavity. Learning Intention 3. (F-IF.5) Identify the Domain of a Quadratic Function, specifically in the context of word problems. A. Students can accurately define domain. B. Students can identify the domain from a graph. C. Students can identify the domain given a word problem. Learning Intention 4. (F-IF 7a) Graph Quadratic Functions and show intercepts, maxima and minima. A. Students can use the key characteristics (intercepts, maxima/minima, axis of symmetry, and concavity) to accurately graph a Quadratic Function. Learning Intention 5. (A-CED.2) Create an equation given a word problem. A. Students can create an equation given an area model, triangular number model and a revenue model.	A-SSE.3a, F-IF.4, F-IF.5 F-IF.7a F-IF.9 A-CED.2,	10-12 days

	<p><u>Mod. 4-Topic 1:Solving Quadratics</u></p>	<p>Learning Intention 1.(A-SSE 1) Interpret expressions that represent a quantity in terms of its context.</p> <ul style="list-style-type: none"> A. Students can identify the parts of an expression, such as terms, factors, and coefficients B. Students can identify coefficients a, b, & c of the standard form and apply them to formulas. <p>Learning Intention 2: (A-SSE 3/ A-SSE2): Students are able to move between different forms of a quadratic equation.</p> <ul style="list-style-type: none"> A. Students can factor to find the zeros of a function. B. Students can complete the square to find the max/min of a quadratic. <p>Learning Intention 3: (A-APR 1): Apply the properties of operations of mathematics with a focus on multiplication, specifically multiplication of polynomials</p> <ul style="list-style-type: none"> A. Students can multiply polynomials using different models, like the area model. <p>*Learning Intention 4: (A-REI.4): Reduced Standard. No longer necessary to go in depth into Completing the Square and the <i>derivation</i> of the Quadratic Formula. Emphasize using the characteristics of the parabola, to find roots and relate to the Discriminant.</p>	<p>A-APR.1; A-SSE.1, A-SSE.2, A-SSE.3 A-REI.4</p>	<p>12-15 days</p>
		<p>Learning Intention 1: (N-CN.1) Understand that complex numbers are of the form $a + bi$ and that imaginary numbers indicate that $i = \sqrt{-1}$. Also perform mathematical operations with complex numbers.</p> <ul style="list-style-type: none"> A. Rewrite expressions involving negative roots using i. B. Rewrite expressions involving imaginary numbers. <p>Learning Intention 2: (N-CN.2): Use properties of operations (commutative, associative, distributive) to add, subtract and multiply complex numbers.</p> <ul style="list-style-type: none"> A. Use properties of the set of complex numbers. B. Determine the sets to which numbers belong. <p>Learning Intention 3: (N-CN.7) Solve quadratic equations that have complex solutions.</p> <ul style="list-style-type: none"> A. Calculate complex roots of quadratic equations and complex zeros of quadratic functions. B. Interpret complex roots of quadratic equations and complex zeros of quadratic functions. 	<p>N.CN.1 N.CN.2 N.CN.7 A.REI.4a A.REI.4b A.REI.7 F.IF.7b A.CED.1 A.CED.2</p>	<p>7-10 days</p>

	Mod 4-Topic 2:Applications of Quadratic Equations	<div><div><div>C. Determine whether a function has complex solutions from a graph and from an equation in radical form.</div><div>D. Determine the number of roots of a quadratic equation from a graph and from an equation in radical form.</div></div><div><div>Learning Intention 4: (A-REI.4a/4b) Understand that there are multiple ways to find solutions to quadratic equations, including by inspection, taking square roots, factoring or using the Quadratic Formula. (Reduce emphasis on completing the square.)</div><div><div>A. Choose an appropriate strategy for solving by noting the form of the equation (factored form, vertex form, standard form)</div></div></div><div><div>Learning Intention 5: (A-REI.7) Solve systems of linear and quadratic equations graphically.</div><div><div>A. If real solutions exist, be able to find them on a graph.</div><div>B. Interpret what the intersection of the graphs and axes mean in terms of a real world context.</div><div>C. Interpret what it means when the graphs do not intersect axes in terms of a real world context.</div></div></div><div><div>Learning Intention 6: (F-IF.7b) Graph square root and cube root functions.</div><div><div>A. Identify similarities and differences between exponential functions to square root and cube root functions.</div><div>B. Recognize that exponential and root functions are inverse functions. (i.e. $f(x) = x^2$ and $f(x) = x^{1/2}$ are inverse functions)</div></div></div><div><div>Learning Intention 7: (A-CED.1) Write and solve quadratic equations and inequalities.</div><div><div>A. Solve a quadratic inequality by calculating the roots.</div><div>B. Graph the solutions of quadratic inequalities.</div><div>C. Apply interval notation to record solutions.</div></div></div><div><div>Learning Intention 8: (A-CED.2) Write and graph quadratic equations representing relationships between quantities.</div><div><div>A. Identify quantities given a real world context.</div><div>B. Use quantities to define variables.</div><div>C. Write equations that show the relationship between the quantities given a real world context.</div></div></div></div>		
Module 3	Learning Intentions	CCSS	Pacing	

4 th Nine Weeks	<p><u>Mod. 3-Topic 2: Exponentials</u> (started, not done)</p>	<p>Learning Intention 1: (A-CED.2) Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.</p> <ul style="list-style-type: none"> A. AStudents can write an exponential function that includes a % increase or decrease with a “b” value that is a decimal. B. Students can sketch a graph of an exponential function and transformations of exponential functions using technology. C. Students can write an exponential function to model a scenario. <p>Learning Intention 2: (A-SSE. 1a.) Interpret parts of an expression, such as terms, factors, and coefficients.</p> <ul style="list-style-type: none"> A. Students can identify common bases of exponential expressions. B. Students can apply the rules of exponents:product rule, quotient, power to power, and rational exponents. <p>Learning Intention 3: (F-IF.4.) Graph an exponential equation using technology.</p> <ul style="list-style-type: none"> A. Students can use technology to graph an exponential equation. <p>Learning Intention 4: (F-IF.5) Determine Domain given the graph of an exponential function.</p> <ul style="list-style-type: none"> A. Students can identify the domain when given a graph of an exponential function. <p>Learning Intention 5:(F-LE.3) Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly.</p> <ul style="list-style-type: none"> A. Students can explain that a function increasing exponentially will exceed a function increasing linearly, using simple and compound interest. <p>Learning Intention 6:(F-IF.9) Compare graphs and tables of different exponential functions.</p> <ul style="list-style-type: none"> A. Students can explain how transformations of exponential functions compare to the original functions. 	<p>A-CED.2, A-SSE.1a, F-IF.4 F-IF.5 F-LE 3 F-IF-9</p>	
	<p><u>Mod 3-Topic 1: Functions Derived from Linear Equations</u> (need to specify SMPs)</p>	<p>Learning Intention 1: (A-CED.2) Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.</p> <ul style="list-style-type: none"> A. Students can write an absolute value function that models a scenario. B. Students can use the graph of the function to estimate solutions in the context of the problem. <p>Learning Intention 2. (F-BF.3) Build new functions from existing functions. [Quadratic, absolute value] Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and</p>	<p>A-CED.2, F.BF.3 F-IF.4 F-IF.7b</p>	<p>12-13 days</p>

		<p>negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.</p> <ul style="list-style-type: none"> A. Experiment with transformations of absolute value with technology B. Graph absolute values C. Understand effect of $f(x) = x$ with $f(x) + C$, $Af(x)$, $f(x-D)$ D. Distinguish between transformations that occur inside and outside the function argument. <p>Learning Intention 3: (F-IF.4.) Use technology to graph and evaluate linear piecewise functions.</p> <ul style="list-style-type: none"> A. Create graphs of linear piecewise functions. B. Students can write linear piecewise functions from scenarios, tables, and graphs. C. Graph and evaluate linear piecewise functions. D. Compare linear absolute value functions to linear piecewise functions. <p>Learning Intention 4:(F-IF.7b) Understand and solve absolute value equations.</p> <ul style="list-style-type: none"> A. Solve and graph linear absolute value inequalities on number lines. B. Graph absolute value functions and use the graph to determine solutions. C. Compare a linear absolute value function to a linear piecewise function. 		
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Integrated II Honors

Quarter 1

Week:	1	2	3	4	5	6	7	8	9
1st Qtr Priority Standards	Review	Geometric Relationships and Properties: G-CO9, G-CO 10, G-CO 11							Review/ Enrichment
Supporting Standards/ released SBAC quest		G-C3 SBAC #6, 24, 27							
Carnegie Units	CH 1	Ch 2, 3, 5.1, 5.2, 6, 7 Skip constructions (and construction proofs) all sections							

Notes on chapters (CO)In all modules, calculator parts optional depending on availability of calculators or desmos use on chrome books	Use other resources and/or parts of chapter 1 for review This material is all Integrated Math 1 level, review as needed for your students	2.1 introduce inductive/deductive, hypothesis/conclusion, if/then conditionals Problem 5 do 1, and 2 only, Problem 6 do 1-4 only 2.2 supplementary, complementary, linear pair, adjacent/vertical angles Problem 3 do only Linear Pair postulate, Segment Addition postulate, and Angle Addition postulate 2.3 types of proofs, especially converting between types, postulate/theorem Problem 1 properties are important, Problem 2 construction proof in optional, Problem 4, 5, and 6 teach theorem, but you do not have to redo the proof activity each time, Problem 7 skip 2.4 corresponding angles, parallel line theorems Problem 2 b and c optional, Problem 2, 3, and 4 do part a only, be sure the review page 184 2.5 converse of theorems in 2.4, recommend teaching within teaching 2.4, with each matching theorem	3.1 (Triangle Sum Th.) Problem 1 do 1 only (triangle tear corners activity), Problem 2 do 1-3 with teacher pre-created triangles to save time, 4-7 as review if necessary, Problem 3 do 1-6, 9-10, 14 only, Problem 4 skip, Talk the talk skip. 3.2 (Triangle Inequality Th.) Teach the theorem, pasta activity is optional, many teachers have their own task for this lesson. 3.3 Problem 1 do 1-8 skip 9, 10, Problem 2 skip 3.4 Warm up is important, Problem 1 do 1-7, 9 Problem 2 skip	5.1 Problem 1 do not cut out shape, just do 1-3, Problem 2 start with 8-11 and then do 5, Problem 3 start with 9-12 and then do 5, do CFU 5.2 Problem 1 and 2 do all 5.3-5.7 Problem 1 is optional (constructions), Problems 2, 3, and 4 when included to teach theorems. Teach 6.2 skip 6.3-6.4	7.1 - 7.2 teach properties of squares, rectangles, and parallelograms only proofs are optional, use minimal time on this section 7.6 review general properties
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Quarter 2

Week:	1	2	3	4	5	6	7	8	9
2nd Qtr Priority Standards	Quadratic Functions: F-IF 4, F-BF 1b, F-IF 7	Polynomials A-APR 1		Quadratic Equations: N-CN 7, A-REI 4, A-REI 7				Review and Enrichment	Finals Project
Supporting Standards and released SBAC questions	N-CN 1, A-SSE 3a, A-SSE 3b, A-REI 4a, A-REI 4b SBAC #32			N-CN 1, A-SSE 3a, A-SSE 3b, A-REI 4a, A-REI 4b					

Carnegie Units	CH 15	Ch 13.1-13.3,13.5, 13.6	CH 12	CH 13.4, 13.7, 14.1, 15.5	
Notes on Chapters	15.1 15.2 15.3 15.4	13.1 problem 1 and 3 13.2 to teach multiplication, teacher discretion method (just introduce problem #4) 13.3 teach factoring, teacher discretion method 13.5 problem 1 only 13.6 teach vocab from Problem 2	12.1 problem 1 and 2 12.2 (make sure you teach 2nd difference, in problem 2 & 3) 12.3 all use graphing calculators, or desmos on chrome books for 12.3-12.6 to allow the students to see the graphs 12.4 12.5 all (teach $-b/2a$) 12.6 all 12.7	13.4 All 13.7 14.1 15.5	

Quarter 3

Week:	1	2	3	4	5	6	7	8	9
3rd Qtr Priority Standards	Similarity: G-SRT 3, G-SRT 4, G-SRT 8.1				Review and Enrichment	Circles: G-C 1, G-C 2, G-C 5			Review and Enrichment
Supporting Standards and released SBAC questions	G-SRT 1, G-SRT 2, G-SRT 5, G-GMD 5					G-GPE 1, G - C 3 SBAC #17			

Carnegie Units	CH 4 & 8 Constructions can be done as demonstration only			CH 9 & 10		
Notes on Chapters	4.1 Problem 2 (pg 262) is important 4.2 constructions optional 4.3 problems 1-4 teach, skip problems 5-6 4.4 Problem 1 optional, problem 2 is important 4.5 Problem 3 optional 4.6 Indirect measurement task in problem 1, can be done outside or inside the classroom, description will be added to folder later, Problem 3 optional (honors)	8.1 problem 1 only 8.2 - 8.4 are important (allow more time for 8.2) 8.5 skip 8.6 introduce Law of Sine and Cosine only		9.1 create premade circles to avoid using compass 9.2 case 1, 2, & 3 proofs are good group activities 9.3 case 1, 2, & 3 proofs are good group activities 9.4 problem 1 number 1 only to discuss relationships 9.5 teach vocab, use problem 3 number 3 and others as needed	10.1 - 10.3 teach as necessary 10.4 save for later	

Quarter 4

4th Qtr Priority Standards	Probability: S-CP 3, S-CP 4, S-CP 5	Review and Enrichment	Capstone: Geometric Modeling G-MG 3
Supporting Standards and released	S-CP 1, S-CP 2, S-CP 6, S-CP 7		ALLOW TIME FOR STATE/AP TESTING, SENIOR ACTIVITIES, ETC. SBAC #29

SBAC questions			
Carnegie Units	CH 19 & 20		(CH 17 & 18 Possibly)
Notes on Chapters	Teach all of chapter 19, then just 20.1 & 20.2. Refer to AP Statistics teacher at your site for needed assistance and supplemental materials		Teach 10.4 Do not teach chapter 11 (save it for Int Math 3) Teach as much of ch 17 and ch 18 as you can get to, but make sure you prepare for them carefully.

VVUHSD Integrated III Pacing Guide 2020-21

Priority Standards from Achieve the Core are in blue; Reduced Standards are in black, Red Standards are eliminated.

Not a standard for this course

	Module 1	Learning Intentions	CCSS	Pacing
1 st Nine Weeks	Review	Include netiquette and tech how to's.		1 week
	Topic 1: Exploring and Analyzing Patterns	<p>Learning Intention 1: Create equations in one variable and use them to solve problems. (Include equations arising from linear and quadratic functions, and exponential functions.) (A.CED.1)</p> <ul style="list-style-type: none"> A. Students create expressions from patterns. B. Students compare patterns to verify they are equivalent. <p>Learning Intention 2: Identify parts of an expression and use the structure to find ways to rewrite equivalent expressions. (A.SSE.1a & 2)</p> <ul style="list-style-type: none"> A. Students create quadratic expressions from patterns. B. Students identify the different forms of a quadratic equation. C. Students manipulate equations from one form to another. <ul style="list-style-type: none"> a. Students factor quadratic equations. b. Students complete the square of a quadratic equation. <p>Learning Intention 3: Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.(A.CED.2)</p> <ul style="list-style-type: none"> A. Students create equations related to a pattern. B. Students use the equation to graph. C. Students use appropriate labels and scales. <p>Learning Intention 4: Interpret key features of graphs, tables, or verbal descriptions in terms of the quantities. Key features include: (F.IF.4)</p> <ul style="list-style-type: none"> A. Students identify key features (intercepts,, positive, or negative; maximums and minimums; symmetries) of graphs and tables B. Students use key features to match different representations of a function (graphs, tables and scenarios). C. Students use technology to verify tables, scenarios, and graphs. 	<p>A.SSE.1a, A.SSE.1b A.SSE.2, *A.APR.1, F.IF.4, F.BF.1a F.IF.9 A.CED.1, A.CED.2 A.REI.4a A.REI.4b A.REI.7 F.IF.8</p>	3 weeks

		<p>Learning Intention 5: Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). (F.IF.9)</p> <ul style="list-style-type: none"> A. Students determine the common features of function families. B. Students compare functions to determine if they belong to the same function family. C. Students compare and contrast functions in the same function family. <p>*Addressed in a different topic.</p>		
	<p>Topic 2: Composing and Decomposing Figures and Functions</p>	<p>Learning Intention 1: Identify the shapes of 2-D cross-sections of 3-D objects, and identify 3-D objects generated by rotations of 2-D objects. (G.GMD.4)</p> <ul style="list-style-type: none"> A. Students determine the type of 2-D shape will be generated by a 3-D cross section. B. Students determine the type of 3-D objects generated by rotating a 2-D object. <p>Learning Intention 2: Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder). (G.MG.1)</p> <ul style="list-style-type: none"> A. Students relate which 3-D shape best describes a real world object. B. Students apply the formulas to measure various characteristics of the object (area, volume, etc). <p>NOT FINISHED</p> <p>Learning Intention 3: Interpret complicated expressions by viewing one or more of their parts as a single entity. (A.SSE.1b)</p> <p>Learning Intention 4: Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial. (A.APR.3)</p> <p>Learning Intention 5: Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of</p>	<p>G.GMD.4 G.MG.1, A.SSE.1b A.APR.3, A.REI.11 F.BF.3, F.IF.4, F.IF.5 F.IF.7c, A.APR.1, N.CN.9 (+) G.GMD.1 G.GMD.3,A. A.REI.10, F.IF.7a</p>	<p>4 weeks</p>

		<p>values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions. (A.REI.11)</p> <p>Learning Intention 6: Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.(F.IF.7c)</p> <p>Learning Intention 7: Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.(F.BF.3) (F.IF.4, F.IF.5, F.IF.7c) (A.APR.1, A.APR.3, F.IF.7c)</p> <p>Learning Intention 8: Students operate on polynomials to produce other polynomials (excluding division). (A.APR.1)</p> <ul style="list-style-type: none"> A. Students multiply polynomials to create cubic polynomials. B. Students use an area model to illustrate multiplication of polynomials <p>Note: We feel like Carnegie does not cover this standard sufficiently for this priority standard. Supplement with Mathia or other supplemental materials when the unit plan is written.</p>		
	Topic 3: Characteristics of Polynomial Functions		<p>F-IF.7c F-BF.3 A-CED.3 A-REI.11 A-APR.3b F.BF.1, F.IF.4 F.IF.6 F.IF.9</p>	1 week
	Module 1 & 2	Learning Intentions	CCSS	Pacing

2 nd Nine Weeks	Module 1-Topic 3: Characteristics of Polynomial Functions	<p>Learning Intention 2: For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. (F.IF.4)</p>	<p>F-IF.7c F-BF.3 A-CED.3 A-REI.11 A-APR.3b F.BF.1, F.IF.4 F.IF.6 F.IF.9</p>	2 weeks
	Module 2-Topic 1: Relating Factors and Zeros	<p>Learning Intention 1: Create equations and inequalities in one variable and use them to solve problems. (A.CED.1)</p> <p>A. Given a graph, formulate an equation using key features of the graph (shape/intercepts)</p> <p>Learning Intention 2: Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. (A.CED.2)</p> <p>A. Convert general form (standard form) polynomials into factored form</p> <p>B. Use the zero-product property to identify zeros (roots) of polynomial equations</p> <p>C. Construct graphs of polynomial functions using the zeros as x-intercepts</p> <p>Learning Intention 3: Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately (A.REI.11)</p> <p>A. Using technology, find (or approximate) the intersection of polynomial functions</p> <p>B. Interpret the intersection of polynomials in a contextual situation</p> <p>Learning Intention 4: Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. (A.CED.3)</p> <p>A. Given a graph, interpret key features in context</p>	<p>A.CED.3 A.REI.11, A.CED.1, A.CED.2</p>	1.5 weeks

		B. Given context, construct a polynomial equation/inequality for the given situation (quadratic polynomial only such as projectile motion)		
	Module 2-Topic 2: Polynomial Models (Optional)		A.CED.3 A.REI.11, A.CED.1, A.CED.2	1.5 weeks
	Module 2-Topic 3: Rational Functions	<p>Learning Intention 1: Students create rational equations in two or more variables to represent relationships between quantities. (A.CED.2)</p> <p>C. Identify independent and dependent variables (input/output; domain/range)</p> <p>D. Identify the properties of rational functions as compared to other types of functions</p> <p>E. Write the appropriate form of the equation represented by the context</p> <p>Learning Intention 2 ECP ONLY or if time permits: Students graph rational equations on coordinate axes with labels and scales. (A.CED.2)</p> <p>A. Create axes with appropriate scaling.</p> <p>B. Assign the appropriate labels to the axes.</p> <p>C. Using key features (asymptotes, intercepts, holes), graph the equation representing the relationship in the context. (+F.IF.C.7d supporting)</p> <p>Learning Intention 3: Students identify parts of a rational expression. (A.SSE.1a)</p> <p>A. Identify the terms of a rational expression</p> <p>B. Simplify using common factors from numerators and denominators</p> <p>C. Calculate common denominators, where necessary</p> <p>D. Identify undefined or excluded values (discontinuities, aka holes/asymptotes)</p> <p>Learning Intention 4: Solve simple rational equations in one variable, and give examples showing how extraneous solutions may arise. (A.REI.A.2)</p> <p>A. Students understand that multiplying by a denominator can include variable terms</p> <p>B. Students check each solution to determine if they are valid for the equation</p> <p>Learning Intention 5: Students will use technology to solve and interpret solutions of equations and inequalities. (A.REI.11)</p> <p>A. Identify the x-coordinate of the intersection of two graphs.</p>	A.APR.6 A.APR.7 A.CED.2, A.REI.2, A.REI.11, A.SSE.1a, F.BF.3, F.IF.5, F-IF.7d	3 weeks

		<p>B. Explain why you know the x-coordinate of the point of intersection is the solution of the two functions.</p> <p>C. Approximate the solutions using technology or tables.</p> <p>Learning Intention 6: Students use technology to apply transformations to rational functions. (F.BF.3)</p> <p>A. Using technology or patterns, students represent transformations on graphs, and determine equations for practical scenarios</p> <p>B. Describe the transformations given a graph, equation, data or scenario</p> <p>C. Identify the changes to key features of the functions (domain, range, intercepts, asymptotes and end behavior)</p> <p>D. Recognize Even and Odd functions from graphs and algebraic expressions (EVEN) $f(x) = f(-x)$ and (ODD) $-f(x) = f(-x)$</p> <p>Learning Intention 7: Students relate the domain of a rational function to its graph. (F.IF.5)</p> <p>A. Identify the restrictions of the domain as asymptotes and/or holes on a graph.</p> <p>Learning Intention 8: Students relate the domain of a rational function to the quantitative relationship it describes. (F.IF.5)</p> <p>A. Distinguish/Explain the difference between discrete and continuous data.</p> <p>B. Determine the subset of real numbers used to describe the domain. <i>(For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.)</i></p>		
	Finals Week			1 week
	Module 3 & 5	Learning Intentions	CCSS	Pacing
	Topic 1: Radical Functions	<p>Learning Intention 1: Solve an equation of the form $f(x)=c$ for a simple function f that has an inverse and write an expression for the inverse. (F-BF.4a)</p> <p>A. Switch x & y solving for the new y-value</p> <p>B. Students understand that rational exponents and radicals are inverse operations</p> <p>Learning Intention 2: Verify by composition that one function is the inverse of another.(F-BF.4b)</p>	<p>F-BF.4 a & b</p> <p>F-BF.4 c & d</p> <p>F.BF.1,</p> <p>F.IF.4</p>	3 weeks

	<p>A. Use function notation to represent substitution (For example, $f(g(x))$ substitutes the function $g(x)$ for x in $f(x)$).</p> <p>B. Substitute variable expressions into functions</p> <p>C. Verify inverses by showing $f(g(x))=x$ and $g(f(x))=x$</p> <p>Learning Intention 3: Model a relationship that uses radical functions. (F.IF.4)</p> <p>A. Identify properties of radical functions (square roots and cube roots)</p> <p>B. Interpret key features of radical functions given a table or a graph</p> <p>C. Identify the restriction of the domain (domain & range)</p> <p>D. Use technology to graph radical functions using key features or from a verbal description.</p> <p>Learning Intention 4 (ECP only or if time permits): Solve simple radical equations in one variable, and give examples showing how extraneous solutions may arise. (A.REI.A.2)</p> <p>A. Students understand that rational exponents and radicals are inverse operations</p> <p>B. Students check each solution to determine if they are valid for the equation</p>		
Topic 2: Exponential and Logarithmic Functions	<p>Learning Intention 1: Graph exponential and logarithmic functions. (F.IF.C.7e)</p> <p>A. Identify the key features of exponential and logarithmic functions.(domain, range, end behavior, asymptotes)</p> <p>B. Analyze and compare the graphs of exponential and logarithmic functions</p> <p>C. Determine when an exponential or logarithmic function is appropriate to use</p> <p>Learning Intention 2: Compare properties of functions through multiple representations. (F.IF.C9)</p> <p>A. Students match equivalent representations of exponential functions when comparing context, graphs, tables, equations</p> <p>B. Students match equivalent representations of logarithmic functions when comparing context, graphs, tables, equations</p>	<p>F.IF.C.7e</p> <p>F.IF.C9</p> <p>F.IF.8a</p> <p>F.IF.8b</p> <p>F.BF.5</p>	4 weeks including Topic 3 & 4
Topic 3:	<p>Learning Intention 1: Solve logarithmic and exponential equations of bases 2, 10 , and e. (F-LE.4)</p>	F-LE.4,	

Exponential and Logarithmic Equations	<p>A. Students can express an exponential equation as a logarithm (support with F.IF.8b)</p> <p>B. Students can express a logarithmic equation as an exponential (Support with F.IF. 8b)</p> <p>C. Students use technology to evaluate these equations, including real world scenarios</p> <p>D. Understand the inverse relationship between exponentials and logarithms, then use this to solve equations.</p>	<p>F.IF.8a</p> <p>F.IF.8b</p> <p>F.BF.5</p>	
Topic 4: Application of Growth Modeling	ECP Only	<p>F-LE.4,</p> <p>F.IF.8b</p>	1 week
Module 5 Topic 1: Interpreting Data in normal distributions	<p>Learning Intention 1: Decide if a specified model is consistent with results from a given data-generating process. (S.IC.2)</p> <p>A. Students create histograms from data.</p> <p>B. Students use the histogram to determine whether or not the data shows a normal distribution pattern</p> <p>C. Students construct a normal distribution curve from the histogram/data.</p> <p>Learning Intention 2: Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. (S.ID.4)</p> <p>A. Use the empirical rule to calculate probability (68, 95, 99.7)</p> <p>B. Accurately label and identify the standard deviations and intervals from the mean on a normal curve</p> <p>C. Calculate the probability of an event given the mean and standard deviation</p> <p>D. Using a z-score table or calculator, find percentiles using z-scores.</p>	<p>S.IC.2</p> <p>S.ID.4</p> <p>S.MD.6</p> <p>S.MD.7</p> <p>S.ID.1</p> <p>S.ID.2</p>	1-1.5 weeks
Module 5 Topic 2: Making Inferences and Justifying Conclusions	<p>(Blending S.IC.3, 4, & 5 to address the key concepts and reduce time spent here.)</p> <p>Learning Intention 1: Understand that sample statistics are used to make inferences about population parameters (mean, variance, scores, etc).(S.IC.1)</p> <p>A. Students use given data (ie curve) to make a statistical statement about the sample and population.</p>	<p>S.IC.1,</p> <p>S.IC.2,</p> <p>S.IC.3,</p> <p>S.IC.4</p> <p>S.IC.5,</p> <p>S.IC.6</p>	1-1.5 weeks

		<p>B. Students identify the sample and population.</p> <p>C. Students identify the statistics and parameters.</p> <p>D. Students use parameters to interpret the sample and its population</p> <p>Note: This is the priority standard, but we feel like it is the umbrella that is developed with the following supporting standards.</p> <p>Learning Intention 2: Analyze and understand the differences in the different types of data collections and the randomization of each. (S.IC.3)</p> <p>A. Students identify the various types of data.</p> <p>B. Students determine the methods of data collection.</p> <p>C. Students apply the appropriate categorization that best fits the data.</p> <p>D. Students make inferences about the data that shows their understanding.</p> <p>E. Students explain if data is biased or random.</p> <p>Learning Intention 3: Find the population mean or proportion and the margin of error given sample surveys or random sampling. (S.IC.4)</p> <p>A. Students will know when to use a population mean or proportion.</p> <p>B. Students solve the margin of error.</p> <p>C. Students interpret the meaning of the error.</p> <p>D. Students identify the intervals in the data given the mean, standard deviation and the confidence level.</p> <p>Learning Intention 4: Compare two treatments and from randomized experiments and decide if the differences are significant. (S.IC.2 & 5)</p> <p>A. Students will make an inference about two treatments.</p> <p>B. Students will determine if the differences are significant.</p> <p>C. Students will justify their conclusions on their inferences.</p> <p>Learning Intention 5: Evaluate reports based on data. (S.IC.6) (Embedded in the other reduced standards.)</p>		
	Module 4	Learning Intentions	CCSS	Pacing

4 th Nine Weeks	<p>Module 4 Topic 1: Trigonometric Relationships</p> <p>Note: Be sure to cover the Unit Circle before Testing!</p>	<p>Note: The following Learning Intentions refer to sine, cosine and tangent functions only.</p> <p>Learning Intention 1: Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. (F-TF.1)</p> <ul style="list-style-type: none"> A. Determine key angles and trigonometric values using the unit circle B. Convert radian and degree measures C. Use $L=r*\theta$ to find arc length <p>Learning Intention 2: Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers. (F-TF.2)</p> <ul style="list-style-type: none"> A. Graph the standard sine and cosine graphs using the unit circle B. Identify whether rotation of an angle is positive or negative on the unit circle C. Explain periodicity (how the interval repeats) in trigonometric functions and its relationship to the unit circle. <p>Learning Intention 3: Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. (F-TF.5)</p> <ul style="list-style-type: none"> A. Identify the midline as the average of the maximum and minimum values of the function B. Model periodic phenomena by finding amplitude, period and midline <p>Learning Intention 4: Students use technology to apply transformations to trigonometric functions. (F.BF.3, F-IF.4)</p> <ul style="list-style-type: none"> A. Using technology or patterns, represent transformations on trigonometric graphs B. Describe the change in period, amplitude and midline C. Identify the changes to key features of the trig functions (domain, range, intercepts, maxima, minima) 	<p>F.TF.1 F-TF.2 F-TF.5 F.BF.3, F-IF.4,</p>	<p>3 weeks</p>
	SBAC Review and Testing	During Review and Testing, begin Module 4, Topic 1. Be sure to cover the unit circle prior to testing		3 weeks

	Module 4 Topic 2: Trigonometric Equations	<p>Learning Intention 1: Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle. (F.TF.1)</p> <p>A. Solve trigonometric equations with answers in radians given a domain restriction</p> <p>Learning Intention 2: Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle. (F.TF.2)</p> <p>A. Solve trigonometric equations using reference angles across the entire domain of real numbers</p> <p>B. Given a graph, identify the domain of the function</p> <p>Learning Intention 3: Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline. (F.TF.5)</p> <p>A. Given a table of data, construct a periodic graph to represent the data</p> <p>B. Given a periodic function (equation) construct a graph (omit regressions)</p> <p>C. Given contextual information, interpret a graph modeling the situation</p> <p>Learning Intention 4: For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. (F.IF.4)</p> <p>A. Given a graph or table, identify key features of a periodic graph (amplitude, midline, period) in context of the modeled situation</p> <p>Learning Intention 5: Use the structure of an expression to identify ways to rewrite it. (A-SSE.2)</p> <p>A. Given a graph, write a sine function as a cosine function</p> <p>B. Given a graph, write a cosine function as a sine function</p> <p>C. ECP only - Given a trigonometric equation, rewrite expressions in the equation using z-substitution or quadratic factoring</p>	<p>A-SSE.2</p> <p>A-REI.1</p> <p>F-TF.2</p> <p>F-TF.5</p> <p>F.IF.4</p> <p>F.TF.1</p> <p>G.SRT.10</p>	3 weeks

		For ECP only (after testing and time permitting) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (G.SRT.10)		
	Other testing and activities			
	Final Exam and Project			2 weeks

VVUHSD Real World Business Math Pacing Guide

Content Area: Mathematics Grade: 12th Grade

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1	Review Using Estimation Math Workshops 24, 25	Review Using Estimation on Math Workshops 26, 27	Unit 1: Employment and Income Use Glencoe Chapters 1, 2, 11					Unit 2: Expenses and Budgeting Use Glencoe Chapter 3, 9, 10	
End of Unit Project			Project 1 - Students will research jobs or professions they are interested in, the neighborhood they want to live, and the car they want to drive. They will start work in their field. Fill out time cards, calculate their net earnings after all taxes and deductions based on part-time and full-time schedules. Each day of class will represent a month in the real world.					Project 2: Students will record and deduct expenses from their simulation salaries and wages in Project 1. Each day of class will represent a month in the real world.	

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
2	Unit 2			Unit 3: Banking and Investment Accounts Use Glencoe Chapters 4, 5, 12					Finals and Review
End of Unit Project				Project 3 - students will open a simulated mutual fund account with \$50 month bond purchase. Students will buy bonds and make decisions as to whether to sell if or when they are in need of cash. Each day of class will represent a month in the real world.					
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
3	Unit 4: Loans and Credit Cards Use Glencoe Chapters 7 and 8					Unit 5: Cash Purchases Use Glencoe Chapter 6			
End of Unit Project	Project 4 - Students will conduct a comparison research on the purchase of a brand new and a used car based on their preference in Unit 1. They will determine if they have to pay over market value or if they will be able to receive a discount on it; and if so, at what percent. In addition, they will research the sales tax, and license and registration fees. They will present their findings on a spreadsheet. They will make a decision about the car to purchase. They will decide how much they need to borrow and calculate their monthly payment.					Project 5 - Students will simulate throwing a birthday party. They will prepare a budget and execute their plan. They will keep in mind the cost of renting chairs and tables, cost of food, drinks, party favors, DJ, etc. They will also be mindful of their income while planning the party.			

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
4	Unit 5		UNIT 6: Cost of Parenting Supplemental Resources						Project s and Final
End Of Unit Project			<p>Project 6 - Students will have the option to work alone or with a partner to determine the cost of being a parent. If they work with a partner, they may combine incomes. They will research a list of essential items and record the prices on a spreadsheet. They will also find the cost of childcare in the neighborhood they plan on living as stated in their Unit 1 project, and evaluate their options. Students will then come up with an annual cost of raising a child and then determine if they can afford to do so based on their individual or combined incomes.</p>						

VVUHSD Business Math Pacing Guide

Content Area: _____ Grade: High School

Directions: Shade (vary by color) the number of weeks for each unit, and title each unit in the space provided below the designated time segment.

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1	Review Using Estimation Math Workshops 24, 25	Review Using Estimation Math Workshops 26, 27	Unit 1: Employment and Income Use Glencoe Chapters 1, 2, 11			Unit 2: Expenses and Budgeting Use Glencoe Chapter 3, 9,10			
End of Unit Project			Project 1 - Students will research jobs or professions they are interested in, the neighborhood they want to live, and the car they want to drive. They will start work in their field. Fill out time cards, calculate their net earnings after all taxes and deductions based on part-time and full-time schedules. Each day of class will represent a month in the real world.			Project 2: Students will record and deduct expenses from their simulation salaries and wages in Project 1. Each day of class will represent a month in the real world.			
2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	Unit 3: Banking and Investment Accounts Use Glencoe Chapters 4, 5, 12				Unit 4: Loans and Credit Cards Use Glencoe Chapters 7 and 8				Finals and Review
End of Unit Project	Project 3 - students will open a simulated mutual fund account with \$50 month bond purchase. Students will buy bonds and make decisions as to whether to sell if or				Project 4 - Students will conduct a comparison research on the purchase of a brand new and a used car based on their preference in Unit 1. They will determine if they have to pay over market value or if they will be able to				

	when they are in need of cash. Each day of class will represent a month in the real world.				receive a discount on it; and if so, at what percent. In addition, they wil research the sales tax, and license and registration fees. They will present their findings on a spreadsheet. They will make a decision about the car to purchase. They will decide how much they need to borrow and calculate their monthly payment.				
3	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	Unit 5: Cash Purchases Use Glencoe Chapter 6			UNIT 6: Cost of Parenting Supplemental Resources			Unit 7: Production, Purchasing, Warehousing and Distribution Use Glencoe Chapters 14, 15, and 18		
End of Unit Project	Project 5 - Students will simulate throwing a birthday party. They will prepare a budget and execute their plan. They will keep in mind the cost of renting chairs and tables, cost of food, drinks, party favors, DJ, etc. They will also be mindful of their income while planning the party.			Project 6 - Students will have the option to work alone or with a partner to determine the cost of being a parent. If they work with a partner, they may combine incomes. They will research a list of essential items and record the prices on a spreadsheet. They will also find the cost of childcare in the neighborhood they plan on living as stated in their Unit 1 project, and evaluate their options. Students will then come up with an annual cost of raising a child and then determine if they can afford to do so based on their individual or combined incomes.			Project 7 - Students will develop a new product, design the best packaging, and calculate the cost of production, storage, and distribution.		
4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	Unit 7: Production, Purchasing, Warehousing and Distribution		Unit 8: Sales, Marketing, and Accounting Use Glencoe Chapters 16, 17, and 20			Review for Project	Review for Final	Projects and Final	

VVUHSD Math Pacing Guide

Content Area: Basic Statistics Grade: 9-12

Quarter	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1	Balance and Fluid Scheduling Time	Unit 1: Basic Probability <i>Students will be able to compute probabilities of one or more independent events.</i>				Unit 2: Discrete Probability Distributions <i>Students will be able to organize simple or compound event distributions into a table. Students can use discrete probability distributions to make decisions about real world events.</i>			Assessment Week
Supporting Standards		S.CP.1 S.CP.2 S.CP.7 S.CP.9 S.MD.2	Supplement CK12 Ch 1 emathInstruction.com Alg 2_Unit 12.1, 12.2, 12.3, 12.5 (Key in Unit Folder) Cpalms lessons	Access the activities in the Unit 1 folder. Make sure to cover vocabulary before BINGO.	Link: http://math.serpmmedia.org/poster_try%2c-try-again.html Poster Activity	S.MD.2 S.MD.3 S.MD.4 S.MD.5.a S.MD.5.b(-) S.MD.6 (-) S.MD.7 (-)	Supplement Cpalms lessons	Activities in folder	
2	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	Unit 3: Two Way Tables and Conditional Probability <i>Students can organize data from two categorical variables into a two way table. Students are able to calculate marginal and conditional distributions from a two way table. Students are able to calculate conditional conditional probabilities from a two way table or real world setting.</i>				Unit 4: Data Collection Methods <i>Students understand the differences between observational studies, surveys and experiments. Students are able to determine if a sample is well designed or if there are obvious sources of bias. Students are able to identify the expected direction of a bias from a bad data collection method.</i>				Assessment Week
Supporting Standards	S.CP.3 S.CP.4 S.CP.8 S.ID.5 S.CP.5	Supplement CK12 Ch 2 Emthinstruction.com Alg 2_Unit 12.4, 12.6 Alg 1_Unit 10.5	Access "Fairy Tale Project" . Be careful with "Neverland" Sample as it goes beyond the scope.		S.IC.3 S.IC.4	Supplement materials Cpalms lesson	Activities in folder		

		Cpalms lessons							
3	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	Unit 5: Organizing and Describing Data Students are able to organize quantitative data into graphical displays. Students need to create and interpret dot plots, histograms, box plots and stem plot in context. Students can make graphical and numerical summaries of the distributions.				<i>Unit 6: Normal Distributions</i> <i>Students understand the major characteristics of a Normal Distribution. They can use the Empirical Rule to make arguments about the distribution. Students can determine the probability of an outcome using the normal distribution.</i>				Assessment Week
Supporting Standards	S.ID.1 S.ID.2 S.ID.3 S.IC.1	Supplement CK12 ch 7 Emathinstruction.com Alg 1 unit 10.1, 10.2, Cpalms lessons	Activities in folder		S.ID 4	Supplement CK12 Ch5 Emathinstruction.com Alg 2 unit 13.3, 13.4, Cpalms lessons		Activities in folder	
4	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
	<i>Unit 7: Simply Inference</i> <i>Students understand the difference between statistics and parameters. They are able to determine if an experiment is consistent with an expectation or statement (-). E.g. flipping a coin to test the fairness of the coin. Understand what types of inferences can be generalized to the population from surveys, studies and experiments.</i>				<i>Unit 8: Bivariate Data</i> <i>Students can graph and describe a bivariate data set. Students can describe association between variables in context. Students are able to create and interpret least squares regression equations in context. Students understand that a residual is the difference between the observed and predicted value.</i>				
Supporting Standards	S.IC.1 S.IC.2 S.IC.3	Supplement Cpalms lessons			S.ID.6 (linear) S.ID.7 S.ID.8 S.ID.9	Supplement Emathinstruction.com Alg 1 unit 10.6, 10.7 Cpalms lessons		Activities in folder	End of the year folder contains ideas for summative projects

Note: (-) indicates that depth and complexity is to be determined by the instructor.

The website for Cpalms has free lessons online available for each of these units, the lists of applicable lessons is in each folder, and the website is at www.cpalms.org/public/resourcecollection/preview/369