



Course Description

A. COVER PAGE

1. Course Title HiSET Mathematics	9. Subject Area ☐ History/Social Science ☐ English ☒ Mathematics ☐ Laboratory Science ☐ Language other than English ☐ Visual & Performing Arts (for 2003) ☐ English as a Second Language
2. Transcript Title / Abbreviation N/A	
3. Transcript Course Code / Number N/A	
4. School Monrovia Community Adult School	
5. District Monrovia Unified School District	
6. City Monrovia, CA	10. Grade Level(s) Adults
7. School / District Web Site www.monroviaadultschool.com	11. Seeking "Honors" Distinction? ☐ Yes ☒ No
8. School Contact Name: Flint Fertig Title/Position: Director of Adult Education and Alternative Programs Phone: 626.471.3035 Fax: 626.471.3036 E-mail: ffertig@monroviaschools.net	12. Unit Value ☐ 0.5 (half year or semester equivalent) ☒ 1.0 (one year equivalent) ☐ 2.0 (two year equivalent) ☐ Other: 0.33 (quarter equivalent) _____
	13. Date of School Board Approval
14. Length of Course: ???	
15. Total Course Hours: ???	
16. Pre-Requisites CASAS pre-test	
17. Co-Requisites N/A	

18. Brief Course Description -

MCAS developed this HiSet Math course to provide students with the fundamental mathematical skills required to successfully complete the mathematics section of the HiSet (High School Equivalency Test). The course encompasses fundamental mathematical concepts in a variety of subjects, such as geometry, algebra, number operations, data analysis, and measurement. Students will participate in the application of mathematics in real-world scenarios, critical reasoning, and problem-solving.

The curriculum places a strong emphasis on fundamental subjects, including basic arithmetic, the comprehension of fractions, decimals, and percentages, the ability to work with algebraic expressions and equations, the interpretation of graphs and data, and the resolution of geometry problems that involve shapes, angles, and measurements. The course is designed to facilitate learners of all skill levels by offering personalized assistance and step-by-step instruction.

Standards Alignment For VT-HiSET-Math: Numerical Relationships

Select a state below to see the standards alignments for this course. You can then roll your mouse over the "State ID" to see the full text of that standard.

State

Document

CA ▾

California Content Standards - 2013 ▾

Load Standards

Numerical Relationships

Ratios and Rates

Lesson	Grade Level	State ID
Equivalent Ratios	6	6.RP.3.a.
	6	MP.1.
	6	MP.4.
	6	MP.5.
	6	MP.6.
	6	MP.7.
Applications of Unit Rates	7	7.RP.1.
	7	7.RP.2.d.
	7	7.RP.3.
	7	MP.1.
	7	MP.4.

Proportional Relationships

Lesson	Grade Level	State ID
Cross Products	7	7.RP.3.
Scale Factor	7	7.G.1.
	7	7.RP.3.
	7	MP.1.
	7	MP.2.
	7	MP.4.
Maps	7	7.G.1.
	7	7.RP.3.
	7	MP.1.
	7	MP.2.
	7	MP.4.
	7	MP.6.
Scale Drawings and Area		



	7	7.G.1.
	7	7.RP.3.
	7	MP.1.
	7	MP.2.
	7	MP.4.

Percent Relationships

Lesson	Grade Level	State ID
Markups and Markdowns		
	7	7.NS.3.
	7	7.RP.3.
	7	MP.1.
Finding an Original Amount		
	7	7.EE.3.
	7	7.NS.2.c.
	7	7.NS.3.
	7	7.RP.3.
	7	MP.1.
	7	MP.4.
	7	MP.8.
Percent Increase and Decrease		
	7	7.NS.3.
	7	7.RP.3.
	7	MP.1.

Rational Numbers

Lesson	Grade Level	State ID
Operations with Integers	7	MP.1.
	7	MP.4.
Solving Problems Involving Rational Numbers		
	7	7.EE.3.
	7	7.NS.1.c.
	7	7.NS.1.d.
	7	7.NS.2.a.
	7	7.NS.2.b.
	7	7.NS.2.c.
	7	7.NS.3.
	7	MP.1.

Working with Formulas

Lesson	Grade Level	State ID
Working with Formulas		
	6	6.EE.2.a.
	6	6.EE.2.c.
	6	6.EE.6.
	6	MP.1.
	6	MP.4.
	6	MP.5.
	6	MP.6.

Literal Equations

11	A-CED.4.
12	A-CED.4.
9	A-CED.4.
9	A-CED.4.
10	A-CED.4.
9	A-CED.4.
12	A-CED.4.
12	A-CED.4.
10	A-CED.4.
9	A-CED.4.
11	A-CED.4.
9	A-CED.4.
12	A-CED.4.
10	A-CED.4.
12	A-CED.4.
10	A-CED.4.
10	A-CED.4.
11	A-CED.4.
12	A-CED.4.
11	A-CED.4.
11	A-CED.4.
10	A-CED.4.
11	A-CED.4.
9	A-CED.4.
9	A-REI.1.
11	A-REI.1.
10	A-REI.1.
12	A-REI.1.
10	A-REI.1.
9	A-REI.1.
12	A-REI.1.
11	A-REI.1.
9	A-REI.3.
10	A-REI.3.
12	A-REI.3.
11	A-REI.3.
10	A-REI.3.
12	A-REI.3.
9	A-REI.3.
11	A-REI.3.

VT-HiSET-Math: Numerical Relationships		Scope and Sequence
Unit	Lesson	Objectives
Ratios and Rates		
Equivalent Ratios		
		Analyze patterns in a table of equivalent ratios.
		Find missing values in a table using ratio reasoning.
Applications of Unit Rates		
		Determine a unit rate from a real-world context.
		Apply unit rates to solve for an unknown in real-world problems.
		Use unit rates to make comparisons.
Proportional Relationships		
Cross Products		
		Use cross products to solve for an unknown quantity in a proportion problem.
		Describe why using cross products is a valid method for solving proportions.
		Use cross products to solve real-world proportion problems.
Scale Factor		
		Use a given scale factor to find an unknown length on a reduction or enlargement.
		Use a given scale factor to find an unknown length on an original.
Maps		
		Find actual distances, scale distances, and scale factors in situations involving maps.
Scale Drawings and Area		
		Compute areas of figures from scale drawings.
Percent Relationships		

VT-HiSET-Math: Numerical Relationships**Scope and Sequence****Unit Lesson****Objectives**

Markups and Markdowns

Solve real-world problems involving a markup or markdown relating each as adding or subtracting from the original.

Finding an Original Amount

Find the original amount in real-world percent problems involving gratuity, tax, commission, markup, discount, or markdown using diagrams and expressions.

Percent Increase and Decrease

Find the percent change by using the ratio of the change in quantity to the original amount.

Use percent increase and decrease to solve real-world problems.

Rational Numbers

Operations with Integers

Solve integer problems involving a variety of operations while applying the properties of operations.

Solving Problems Involving Rational Numbers

Solve real-world and mathematical problems involving addition, subtraction, multiplication, and division with rational numbers.

Working with Formulas

Working with Formulas

Evaluate scientific and mathematical formulas for given values.

Literal Equations

Rearrange a literal equation to highlight a quantity of interest and use it to solve problems.

TEST

VT-HiSET-Math: Numerical Relationships

Course Documents (1)

[VT-HiSET-Math: Numerical Relationships](#)
[Numerical Relationships](#)
[Ratios and Rates](#)
[Equivalent Ratios](#)  [Guided Notes](#)
[Instruction](#) 

How can you use a ratio table to identify patterns and find equivalent ratios?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice solving problems about equivalent ratios.

[Quiz Answers](#)
[Applications of Unit Rates](#)  [Guided Notes](#)
[Instruction](#) 

How are unit rates used in the real world?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice using unit rates in real-world situations.

[Quiz Answers](#)
[Proportional Relationships](#)
[Cross Products](#)  [Guided Notes](#)
[Instruction](#) 

What are cross products, and how do they relate to proportions?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Solve problems involving proportions and write about the solutions.

[Quiz Answers](#)
[Scale Factor](#)  [Guided Notes](#)
[Instruction](#) 

How is proportional reasoning used to solve scale drawing problems?

[Summary](#) 


Review and connect what you learned.

[Assignment](#) 

Practice finding dimensions using scale factors.

[Quiz Answers](#)

[Maps](#)  [Guided Notes](#)

[Instruction](#) 

How is proportional reasoning used to interpret distances on maps?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice finding distances with map scales.

[Quiz Answers](#)

[Scale Drawings and Area](#)  [Guided Notes](#)

[Instruction](#) 

How can you solve area problems with scale drawings?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice solving area problems with scale drawings.

[Quiz Answers](#)

[Percent Relationships](#)

[Markups and Markdowns](#)  [Guided Notes](#)

[Assignment](#) 

Markups and Markdowns

[Instruction](#) 

How can you find the price after a markup or markdown?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Find the markup and markdown prices.

[Quiz Answers](#)

[Finding an Original Amount](#)  [Guided Notes](#)

[Instruction](#) 

How can you find the original amount in real-world percent problems?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Solve problems about selling cameras and write about the solutions.

[Quiz Answers](#)

[Percent Increase and Decrease](#)  [Guided Notes](#)

[Instruction](#) 

How can a percent be used to describe a change in quantity?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice finding percent change.

[Quiz Answers](#)

[Rational Numbers](#)

[Operations with Integers](#)  [Guided Notes](#)

[Instruction](#) 

How can you simplify integer expressions that contain more than one operation?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice using the order of operations.

[Quiz Answers](#)

[Solving Problems Involving Rational Numbers](#)  [Guided Notes](#)

[Instruction](#) 

How can you use the order of operations to solve real-world problems involving rational numbers?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Solve a real-world problem and write about the solution.

[Quiz Answers](#)

[Working with Formulas](#)

[Working with Formulas](#)  [Guided Notes](#)

[Instruction](#) 

How are variables used in real-world applications?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice using math and science formulas to solve real-world problems.

[Quiz Answers](#)

[Literal Equations](#)  [Guided Notes](#)

[Instruction](#) 

What does it mean to solve for a variable when the solution is not a number?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice solving and using literal equations.

[Quiz Answers](#)

[Diagnostic PostTest](#)

[TEST Answers](#)

Standards Alignment For VT-HiSET-Math: Nonlinear Functions and Pythagorean Theorem

Select a state below to see the standards alignments for this course. You can then roll your mouse over the "State ID" to see the full text of that standard.

State

Document

CA ▾

All ▾

Load Standards

Nonlinear Functions and Pythagorean Theorem

Nonlinear Functions

Lesson	Grade Level	State ID
Exponential Growth Functions	11	A-SSE.3.c.
	9	A-SSE.3.c.
	9	A-SSE.3.c.
	12	A-SSE.3.c.
	10	A-SSE.3.c.
	10	A-SSE.3.c.
	12	A-SSE.3.c.
	11	A-SSE.3.c.
	10	CA.AII12.0.
	12	CA.AII12.0.
	9	CA.AII12.0.
	11	CA.AII12.0.
	11	F-IF.4.
	10	F-IF.4.
	9	F-IF.4.
	9	F-IF.4.
	9	F-IF.4.
	12	F-IF.4.
	12	F-IF.4.
	9	F-IF.4.
	12	F-IF.4.
	10	F-IF.4.
	11	F-IF.4.
	9	F-IF.4.
	12	F-IF.4.
	11	F-IF.4.
	10	F-IF.4.
	11	F-IF.4.
	11	F-IF.4.
	11	F-IF.4.
	10	F-IF.4.



9	F-IF.4.
12	F-IF.4.
10	F-IF.4.
10	F-IF.4.
12	F-IF.4.
10	F-IF.7.e.
12	F-IF.7.e.
9	F-IF.7.e.
12	F-IF.7.e.
9	F-IF.7.e.
9	F-IF.7.e.
9	F-IF.7.e.
12	F-IF.7.e.
10	F-IF.7.e.
11	F-IF.7.e.
10	F-IF.7.e.
12	F-IF.7.e.
10	F-IF.7.e.
11	F-IF.7.e.
11	F-IF.7.e.
10	F-IF.7.e.
11	F-IF.7.e.
12	F-IF.7.e.
9	F-IF.7.e.
11	F-IF.7.e.
12	F-IF.8.b.
10	F-IF.8.b.
9	F-IF.8.b.
11	F-IF.8.b.
10	F-IF.8.b.
12	F-IF.8.b.
11	F-IF.8.b.
9	F-IF.8.b.
9	F-LE.1.a.
11	F-LE.1.a.
9	F-LE.1.a.
10	F-LE.1.a.
12	F-LE.1.a.
11	F-LE.1.a.
10	F-LE.1.a.
12	F-LE.1.a.
11	F-LE.1.c.
12	F-LE.1.c.
12	F-LE.1.c.
11	F-LE.1.c.
9	F-LE.1.c.
10	F-LE.1.c.
10	F-LE.1.c.
9	F-LE.1.c.
10	F-LE.3.

11	F-LE.3.
12	F-LE.3.
10	F-LE.3.
12	F-LE.3.
9	F-LE.3.
12	F-LE.3.
9	F-LE.3.
9	F-LE.3.
11	F-LE.3.
11	F-LE.3.
10	F-LE.3.
12	F-LE.5.
9	F-LE.5.
9	F-LE.5.
12	F-LE.5.
11	F-LE.5.
11	F-LE.5.
10	F-LE.5.
10	F-LE.5.

Exponential Decay Functions

11	CA.A1112.0.
10	CA.A1112.0.
9	CA.A1112.0.
12	CA.A1112.0.
9	F-IF.4.
11	F-IF.4.
9	F-IF.4.
12	F-IF.4.
9	F-IF.4.
11	F-IF.4.
11	F-IF.4.
12	F-IF.4.
12	F-IF.4.
9	F-IF.4.
10	F-IF.4.
10	F-IF.4.
11	F-IF.4.
12	F-IF.4.
10	F-IF.4.
11	F-IF.4.
11	F-IF.4.
12	F-IF.4.
9	F-IF.4.
12	F-IF.4.
10	F-IF.4.
9	F-IF.4.
10	F-IF.4.
10	F-IF.4.
9	F-IF.7.e.
10	F-IF.7.e.
11	F-IF.7.e.

	11	F-IF.7.e.
	9	F-IF.7.e.
	12	F-IF.7.e.
	11	F-IF.7.e.
	10	F-IF.7.e.
	12	F-IF.7.e.
	12	F-IF.7.e.
	10	F-IF.7.e.
	10	F-IF.7.e.
	11	F-IF.7.e.
	11	F-IF.7.e.
	9	F-IF.7.e.
	12	F-IF.7.e.
	9	F-IF.7.e.
	10	F-IF.7.e.
	12	F-IF.7.e.
	9	F-IF.7.e.
	11	F-LE.1.c.
	9	F-LE.1.c.
	10	F-LE.1.c.
	12	F-LE.1.c.
	10	F-LE.1.c.
	12	F-LE.1.c.
	11	F-LE.1.c.
	9	F-LE.1.c.
	11	F-LE.5.
	11	F-LE.5.
	12	F-LE.5.
	10	F-LE.5.
	10	F-LE.5.
	12	F-LE.5.
	9	F-LE.5.
	9	F-LE.5.
Introduction to Quadratic Functions	10	A-CED.2.
	11	A-CED.2.
	10	A-CED.2.
	10	A-CED.2.
	10	A-CED.2.
	9	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	11	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	9	A-CED.2.
	11	A-CED.2.
	12	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	12	A-CED.2.

11	A-CED.2.
12	A-CED.2.
10	A-CED.2.
9	A-CED.2.
11	A-CED.2.
10	A-CED.2.
11	A-CED.2.
12	CA.AI21.0.
11	CA.AI21.0.
10	CA.AI21.0.
9	CA.AI21.0.
10	CA.AII10.0.
12	CA.AII10.0.
11	CA.AII10.0.
9	CA.AII10.0.
12	CA.AII8.0.
10	CA.AII8.0.
11	CA.AII8.0.
9	CA.AII8.0.
10	F-IF.7.a.
12	F-IF.7.a.
11	F-IF.7.a.
9	F-IF.7.a.
12	F-IF.7.a.
12	F-IF.7.a.
9	F-IF.7.a.
10	F-IF.7.a.
11	F-IF.7.a.
11	F-IF.7.a.
9	F-IF.7.a.
10	F-IF.7.a.

Pythagorean Theorem

Lesson	Grade Level	State ID
Finding the Hypotenuse in Right Triangles	8	8.EE.2.
	8	8.G.7.
	8	CA.AI2.0.
	8	CA.GE15.0.
	8	MP.1.
Unknown Leg Lengths in Right Triangles	8	8.EE.2.
	8	8.G.7.
	8	CA.AI2.0.
	8	CA.GE15.0.
	8	MP.1.

VT-HiSET-Math: Nonlinear Functions and Pythagorean Theorem		Scope and Sequence
Unit	Lesson	Objectives
Nonlinear Functions		
Exponential Growth Functions		
		Identify an exponential growth function given tables, graphs, and function rules, determining the rate of change.
		Graph an exponential growth function, and state the domain and range.
		State the domain and range of an exponential growth function.
		Write an exponential growth function to model a real-world problem, pointing out constraints in the modeling context.
Exponential Decay Functions		
		Identify an exponential decay function given tables, graphs, and function rules, determining the rate of change.
		Graph an exponential decay function, and state the domain and range.
		Write an exponential decay function to model a real-world problem, pointing out constraints in the modeling context.
		Relate exponential growth and decay functions using laws of exponents and reflections over the y-axis.
Introduction to Quadratic Functions		
		Identify a quadratic function and the values of the coefficients and constant from the standard form.
		Evaluate a quadratic function using tables, graphs, and equations.
		Calculate the rate of change of a quadratic function over an interval of its domain, and compare it to linear and exponential functions.
Pythagorean Theorem		
Finding the Hypotenuse in Right Triangles		
		Use the Pythagorean theorem to find the length of the hypotenuse of a right triangle.
		Approximate the length of the hypotenuse of a right triangle to solve real-world problems.

Unit Lesson

Objectives

Unknown Leg Lengths in Right
Triangles

Given the length of one leg and the hypotenuse of a right triangle, use the Pythagorean theorem to find the length of the other leg.

Approximate the length of a leg of a right triangle to solve real-world problems.

TEST

VT-HiSET-Math: Nonlinear Functions and Pythagorean Theorem

Course Documents (1)

[VT-HiSET-Math: Nonlinear Functions and Pythagorean Theorem](#)
[Nonlinear Functions and Pythagorean Theorem](#)
[Nonlinear Functions](#)
[Exponential Growth Functions](#)  [Guided Notes](#)
[Instruction](#) 
[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice with exponential growth functions.

[Quiz Answers](#)
[Exponential Decay Functions](#)  [Guided Notes](#)
[Instruction](#) 

What does it mean to decay exponentially?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice with exponential decay.

[Quiz Answers](#)
[Introduction to Quadratic Functions](#)  [Guided Notes](#)
[Instruction](#) 

What is a quadratic function?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice identifying and evaluating quadratic functions.

[Quiz Answers](#)
[Pythagorean Theorem](#)
[Finding the Hypotenuse in Right Triangles](#)  [Guided Notes](#)
[Instruction](#) 

How can you find the length of the hypotenuse of a right triangle?

[Summary](#) 


Review and connect what you learned.

[Assignment](#) 

Practice using the Pythagorean theorem to solve problems.

[Quiz Answers](#)

[Unknown Leg Lengths in Right Triangles](#)  [Guided Notes](#)

[Instruction](#) 

How do you find the length of an unknown leg in a right triangle?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice using the Pythagorean theorem to find the missing leg in a right triangle.

[Quiz Answers](#)

[Diagnostic PostTest](#)

[TEST Answers](#)

Standards Alignment For VT-HiSET-Math: Linear Functions and Scientific Notation

Select a state below to see the standards alignments for this course. You can then roll your mouse over the "State ID" to see the full text of that standard.

State

Document

CA

All

Load Standards

Linear Functions and Scientific Notation

Solving Linear Equations

Lesson	Grade Level	State ID
Solving Two-Step Equations	7	7.EE.3.
	7	7.NS.3.
	7	7NS1.2.
	7	MP.1.
	7	MP.6.
Equations in the Real World	7	7.EE.3.
	7	7.EE.4.a.
	7	7.NS.3.
	7	7AF1.1.
	7	7MG2.1.
	7	7NS1.2.

Linear Functions

Lesson	Grade Level	State ID
Slope-Intercept Form of a Line	11	A-CED.2.
	10	A-CED.2.
	11	A-CED.2.
	9	A-CED.2.
	10	A-CED.2.
	11	A-CED.2.
	10	A-CED.2.
	12	A-CED.2.
	10	A-CED.2.
	11	A-CED.2.
	12	A-CED.2.
	12	A-CED.2.
	10	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	11	A-CED.2.



9	A-CED.2.
12	A-CED.2.
9	A-CED.2.
11	A-CED.2.
10	A-CED.2.
12	A-CED.2.
9	A-CED.2.
9	A-CED.2.
10	AI25.3.
12	CA.AI17.0.
10	CA.AI17.0.
11	CA.AI17.0.
9	CA.AI17.0.
9	CA.AI6.0.
10	CA.AI6.0.
11	CA.AI6.0.
12	CA.AI6.0.
9	CA.AI7.0.
11	CA.AI7.0.
10	CA.AI7.0.
12	CA.AI7.0.
9	F-IF.1.
10	F-IF.1.
9	F-IF.1.
12	F-IF.1.
12	F-IF.1.
10	F-IF.1.
11	F-IF.1.
11	F-IF.1.
10	F-IF.5.
9	F-IF.5.
12	F-IF.5.
11	F-IF.5.
11	F-IF.5.
12	F-IF.5.
9	F-IF.5.
9	F-IF.5.
10	F-IF.5.
10	F-IF.5.
12	F-IF.5.
12	F-IF.5.
9	F-IF.5.
11	F-IF.5.
11	F-IF.5.
12	F-IF.5.
12	F-IF.5.
9	F-IF.5.
10	F-IF.5.
11	F-IF.5.
11	F-IF.5.

10	F-IF.5.
9	F-IF.5.
10	F-IF.5.
9	F-IF.6.
11	F-IF.6.
10	F-IF.6.
12	F-IF.6.
11	F-IF.6.
9	F-IF.6.
10	F-IF.6.
12	F-IF.6.
9	F-IF.6.
10	F-IF.6.
12	F-IF.6.
10	F-IF.6.
10	F-IF.6.
12	F-IF.6.
9	F-IF.6.
11	F-IF.6.
11	F-IF.6.
9	F-IF.6.
12	F-IF.6.
11	F-IF.6.
9	F-IF.7.a.
10	F-IF.7.a.
10	F-IF.7.a.
12	F-IF.7.a.
10	F-IF.7.a.
11	F-IF.7.a.
12	F-IF.7.a.
9	F-IF.7.a.
9	F-IF.7.a.
12	F-IF.7.a.
11	F-IF.7.a.
11	F-IF.7.a.
12	F-IF.9.
9	F-IF.9.
9	F-IF.9.
11	F-IF.9.
12	F-IF.9.
12	F-IF.9.
11	F-IF.9.
10	F-IF.9.
12	F-IF.9.
10	F-IF.9.
11	F-IF.9.
11	F-IF.9.
10	F-IF.9.
10	F-IF.9.
9	F-IF.9.

	12	F-IF.9.
	9	F-IF.9.
	10	F-IF.9.
	9	F-IF.9.
	11	F-IF.9.
	12	F-LE.1.b.
	10	F-LE.1.b.
	9	F-LE.1.b.
	12	F-LE.1.b.
	10	F-LE.1.b.
	11	F-LE.1.b.
	11	F-LE.1.b.
	9	F-LE.1.b.
Point-Slope Form of a Line	10	A-CED.2.
	11	A-CED.2.
	10	A-CED.2.
	10	A-CED.2.
	10	A-CED.2.
	9	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	11	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	9	A-CED.2.
	11	A-CED.2.
	12	A-CED.2.
	9	A-CED.2.
	12	A-CED.2.
	12	A-CED.2.
	11	A-CED.2.
	12	A-CED.2.
	10	A-CED.2.
	9	A-CED.2.
	11	A-CED.2.
	10	A-CED.2.
	11	A-CED.2.
	9	CA.AI17.0.
	11	CA.AI17.0.
	12	CA.AI17.0.
	10	CA.AI17.0.
	11	CA.AI6.0.
	10	CA.AI6.0.
	12	CA.AI6.0.
	9	CA.AI6.0.
	10	CA.AI7.0.
	12	CA.AI7.0.
	9	CA.AI7.0.
	11	CA.AI7.0.
	9	F-IF.1.

10	F-IF.1.
9	F-IF.1.
11	F-IF.1.
11	F-IF.1.
10	F-IF.1.
12	F-IF.1.
12	F-IF.1.
10	F-IF.5.
12	F-IF.5.
12	F-IF.5.
10	F-IF.5.
9	F-IF.5.
9	F-IF.5.
10	F-IF.5.
11	F-IF.5.
11	F-IF.5.
10	F-IF.5.
12	F-IF.5.
9	F-IF.5.
11	F-IF.5.
11	F-IF.5.
9	F-IF.5.
11	F-IF.5.
12	F-IF.5.
12	F-IF.5.
10	F-IF.5.
10	F-IF.5.
12	F-IF.5.
9	F-IF.5.
9	F-IF.5.
11	F-IF.5.
10	F-IF.6.
10	F-IF.6.
9	F-IF.6.
12	F-IF.6.
11	F-IF.6.
12	F-IF.6.
10	F-IF.6.
9	F-IF.6.
9	F-IF.6.
12	F-IF.6.
10	F-IF.6.
10	F-IF.6.
12	F-IF.6.
9	F-IF.6.
11	F-IF.6.
11	F-IF.6.
11	F-IF.6.
12	F-IF.6.
9	F-IF.6.

	11	F-IF.6.
	12	F-IF.7.a.
	12	F-IF.7.a.
	9	F-IF.7.a.
	11	F-IF.7.a.
	12	F-IF.7.a.
	10	F-IF.7.a.
	9	F-IF.7.a.
	10	F-IF.7.a.
	9	F-IF.7.a.
	10	F-IF.7.a.
	11	F-IF.7.a.
	11	F-IF.7.a.
	12	F-LE.1.b.
	9	F-LE.1.b.
	9	F-LE.1.b.
	11	F-LE.1.b.
	10	F-LE.1.b.
	11	F-LE.1.b.
	12	F-LE.1.b.
	10	F-LE.1.b.

Scientific Notation

Lesson	Grade Level	State ID
Introduction to Scientific Notation	8	8.EE.3.
	8	CA.AI15.0.
	8	MP.1.
	8	MP.3.
	8	MP.7.
	8	MP.8.
Operations with Scientific Notation	8	8.EE.4.
	8	CA.AI15.0.
	8	MP.1.

VT-HiSET-Math: Linear Functions and Scientific Notation		Scope and Sequence
Unit	Lesson	Objectives
Solving Linear Equations		
	Solving Two-Step Equations	
		Solve two-step equations.
		Solve two-step equations in the real world and interpret the results.
	Equations in the Real World	
		Write and solve equations to represent real-world situations.
Linear Functions		
	Slope-Intercept Form of a Line	
		Identify the slope and y-intercept of a linear function, and use them to graph the function.
		Write a linear function, in slope-intercept form, for a given relationship.
		Analyze how a change in a parameter of a linear function affects its graph or the scenario it represents.
	Point-Slope Form of a Line	
		Write the equation of a line given its slope and a point on the line in point-slope form, and express the relationship as a function.
		Graph a line given its equation in point-slope form, identifying the slope and intercepts.
Scientific Notation		
	Introduction to Scientific Notation	
		Convert very small or very large numbers between scientific notation and standard notation.
		Order and estimate products and quotients of numbers written in scientific notation.
	Operations with Scientific Notation	

Unit Lesson

Objectives

Evaluate products and quotients of scientific notation values.

Recognize scientific notation answers generated by technology and identify the symbols associated with the value.

Identify proper units of measurement for quantities written in scientific notation.

TEST

VT-HiSET-Math: Linear Functions and Scientific Notation

Course Documents (1)

[VT-HiSET-Math: Linear Functions and Scientific Notation](#)
[Linear Functions and Scientific Notation](#)
[Solving Linear Equations](#)
[Solving Two-Step Equations](#)  [Guided Notes](#)
[Instruction](#) 

How can you solve a two-step equation?

[Assignment](#) 

Explore solving two-step equations.

[Instruction](#) 

How can you solve a two-step equation?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice solving two-step equations.

[Quiz Answers](#)
[Equations in the Real World](#)  [Guided Notes](#)
[Instruction](#) 

How can you use equations to solve real-world problems?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice using equations to solve real-world problems.

[Quiz Answers](#)
[Linear Functions](#)
[Slope-Intercept Form of a Line](#)  [Guided Notes](#)
[Instruction](#) 

Can you tell what the graph of a line will look like without finding points or graphing it?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice applying the slope-intercept form of an equation.

[Quiz Answers](#)


[Point-Slope Form of a Line](#) [Guided Notes](#)

[Instruction](#)

What is the point-slope form of a line, and why would you want to use it?

[Summary](#)

Review and connect what you learned.

[Assignment](#)

Practice using point-slope form to write and graph linear functions.

[Quiz Answers](#)

[Scientific Notation](#)

[Introduction to Scientific Notation](#) [Guided Notes](#)

[Instruction](#)

What is scientific notation?

[Summary](#)

Review and connect what you learned.

[Assignment](#)

Solve problems with very large and very small numbers, and write about scientific notation.

[Quiz Answers](#)

[Operations with Scientific Notation](#) [Guided Notes](#)

[Instruction](#)

How do you multiply and divide with scientific notation?

[Summary](#)

Review and connect what you learned.

[Assignment](#)

Practice multiplying and dividing numbers in scientific notation.

[Quiz Answers](#)

[Diagnostic PostTest](#)

[TEST Answers](#)

Standards Alignment For VT-HiSET-Math: Geometric Relationships

Select a state below to see the standards alignments for this course. You can then roll your mouse over the "State ID" to see the full text of that standard.

State

Document

CA ▾

All ▾

Load Standards

Geometric Relationships

Two-Dimensional Geometry

Lesson	Grade Level	State ID
Perimeter, Area, and Volume: Concepts and Units	3	3.MD.5.a.
	3	3.MD.5.b.
	3	3.MD.6.
	3	3.MD.7.a.
	3	3.MD.8.
	3	3MG1.1.
	3	3MG1.2.
	3	3MG1.3.
	5	5.MD.3.a.
	5	5.MD.3.b.
	5	5.MD.4.
	5	5.MD.5.a.
	5	5MG1.3.
	4	MP.2.
	5	MP.2.
	3	MP.2.
	3	MP.5.
	4	MP.5.
	5	MP.5.
	4	MP.6.
	5	MP.6.
	3	MP.6.
Circumference	7	7.G.4.
	7	7MG2.1.
	7	MP.1.
	7	MP.6.
Area of a Circle	7	7.G.4.
	7	7MG2.1.
	7	MP.1.
	7	MP.2.



Three-Dimensional Geometry

Lesson	Grade Level	State ID
Applications of Volume and Surface Area	7	7.G.6.
	7	7MG2.1.
	7	7MG2.3.
	7	MP.2.
Applications with the Volume of a Cylinder	8	8.EE.2.
	8	8.G.9.
	8	8.NS.1.
	8	CA.GE8.0.
	8	CA.GE9.0.
Applications with the Volume of a Cone	8	MP.1.
	8	8.EE.2.
	8	8.G.9.
	8	8.NS.1.
	8	CA.GE8.0.
	8	CA.GE9.0.
	8	MP.1.

VT-HiSET-Math: Geometric Relationships		Scope and Sequence
Unit	Lesson	Objectives
Two-Dimensional Geometry		
	Perimeter, Area, and Volume: Concepts and Units	
		Express perimeter, area, and volume using measurements such as units, square units, and cubic units.
		Measure length, perimeter, area, and volume using visual models of rectangles and rectangular solids by counting units.
		Real-World Application: Determine which kind of measurement is appropriate for a given real-world situation.
	Circumference	
		Solve problems involving the circumference of a circle.
	Area of a Circle	
		Solve problems involving the area of a circle.
		Describe the relationship between the circumference and area of a circle.
Three-Dimensional Geometry		
	Applications of Volume and Surface Area	
		Solve real-world problems by determining if they require finding surface area or volume.
	Applications with the Volume of a Cylinder	
		Find unknown dimensions of a cylinder given its volume.
		Solve real-life problems using the volume of cylinders.
	Applications with the Volume of a Cone	
		Find unknown dimensions of a cone given its volume.
		Solve a real-world problem utilizing the formula for volume of a cone.

TEST

VT-HiSET-Math: Geometric Relationships

Course Documents (1)

[VT-HiSET-Math: Geometric Relationships](#)
[Geometric Relationships](#)
[Two-Dimensional Geometry](#)
[Perimeter, Area, and Volume: Concepts and Units](#)  [Guided Notes](#)
[Instruction](#) 

How do you measure the distance around or space inside something?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice finding the perimeter, area, or volume of figures.

[Quiz Answers](#)
[Circumference](#)  [Guided Notes](#)
[Instruction](#) 

What is circumference of a circle and how is it used to solve problems?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice finding circumference.

[Quiz Answers](#)
[Area of a Circle](#)  [Guided Notes](#)
[Instruction](#) 

How do you find the area of a circle and use it to solve problems?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice solving problems involving the area of a circle.

[Quiz Answers](#)
[Three-Dimensional Geometry](#)
[Applications of Volume and Surface Area](#)  [Guided Notes](#)
[Instruction](#) 

How can you solve real-world problems using surface area and volume?

[Summary](#) 


Review and connect what you learned.

[Assignment](#) 

Practice finding volume and surface area.

[Quiz Answers](#)

[Applications with the Volume of a Cylinder](#)  [Guided Notes](#)

[Instruction](#) 

How can you apply the formula for the volume of a cylinder to solve problems?

[Assignment](#) 

Explore possible volumes when changing the dimensions of a cylinder.

[Instruction](#) 

How can you apply the formula for the volume of a cylinder to solve problems?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice applying the volume formula of a cylinder to solve problems.

[Quiz Answers](#)

[Applications with the Volume of a Cone](#)  [Guided Notes](#)

[Instruction](#) 

How can you use the formula for the volume of a cone to solve problems?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice solving problems by applying the formula for the volume of a cone.

[Quiz Answers](#)

[Diagnostic PostTest](#)

[TEST Answers](#)

Standards Alignment For VT-HiSET-Math: Data Displays and Probability

Select a state below to see the standards alignments for this course. You can then roll your mouse over the "State ID" to see the full text of that standard.

State

Document

CA

All

Load Standards

Data Displays and Probability

Data Representation

Lesson	Grade Level	State ID
Data Representation	6	MP.1.
	6	MP.4.
	6	MP.5.
	6	MP.6.
Circle Graphs	6	MP.1.
	6	MP.4.
	6	MP.5.
	6	MP.6.
Box Plots	9	N-Q.1.
	12	N-Q.1.
	9	N-Q.1.
	11	N-Q.1.
	10	N-Q.1.
	11	N-Q.1.
	10	N-Q.1.
	12	N-Q.1.
	10	S-ID.1.
	9	S-ID.1.
	12	S-ID.1.
	10	S-ID.1.
	10	S-ID.1.
	9	S-ID.1.
	11	S-ID.1.
	11	S-ID.1.
	12	S-ID.1.
	11	S-ID.1.
	9	S-ID.1.
	12	S-ID.1.
	9	S-ID.2.
	12	S-ID.2.
	11	S-ID.2.



9	S-ID.2.
9	S-ID.2.
11	S-ID.2.
10	S-ID.2.
12	S-ID.2.
12	S-ID.2.
10	S-ID.2.
10	S-ID.2.
11	S-ID.2.
9	S-ID.3.
12	S-ID.3.
11	S-ID.3.
11	S-ID.3.
9	S-ID.3.
9	S-ID.3.
11	S-ID.3.
10	S-ID.3.
10	S-ID.3.
10	S-ID.3.
12	S-ID.3.
12	S-ID.3.

Probability

Lesson	Grade Level	State ID
Combinations	6	MP.1.
	6	MP.4.
	6	MP.5.
	6	MP.6.
Experimental vs. Theoretical Probability	7	7.SP.6.
	7	7.SP.7.a.
	7	7.SP.7.b.
	7	MP.4.

VT-HiSET-Math: Data Displays and Probability		Scope and Sequence
Unit	Lesson	Objectives
Data Representation		
Data Representation		
		Interpret different types of data displays.
		Identify an appropriate representation for displaying different data sets.
Circle Graphs		
		Interpret circle graphs.
		Use circle graphs to make predictions.
		Construct a circle graph to display data.
Box Plots		
		Create and interpret box plots.
		Analyze box plots for symmetry and outliers.
		Compare box plots.
Probability		
Combinations		
		Find possible outcomes.
		Solve or identify solutions to problems involving combinations.
Experimental vs. Theoretical Probability		
		Compare experimental results to theoretical probabilities and make conjectures about the results.
		Explain possible sources of discrepancy between the theoretical and experimental probability of an event.
TEST		

VT-HiSET-Math: Data Displays and Probability

Course Documents (1)

[VT-HiSET-Math: Data Displays and Probability](#)
[Data Displays and Probability](#)
[Data Representation](#)
[Data Representation](#)  [Guided Notes](#)
[Instruction](#) 

What is the best way to display data?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice using visual representations of data.

[Quiz Answers](#)
[Circle Graphs](#)  [Guided Notes](#)
[Instruction](#) 

How can you use circle graphs to display data?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Learn how to create a circle graph report.

[Assignment](#) 

Practice solving problems involving circle graphs.

[Quiz Answers](#)
[Box Plots](#)  [Guided Notes](#)
[Instruction](#) 

What does a box plot tell you about a data set?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice analyzing data to create and interpret box plots.

[Quiz Answers](#)
[Probability](#)
 [Combinations](#)  [Guided Notes](#)
[Instruction](#) 


How can you find combinations?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice finding possible outcomes of combinations.

[Quiz Answers](#)

[Experimental vs. Theoretical Probability](#)  [Guided Notes](#)

[Instruction](#) 

What is the difference between theoretical probability and experimental probability?

[Assignment](#) 

Explore the relationship between experimental and theoretical probability using probability models.

[Instruction](#) 

What is the difference between theoretical probability and experimental probability?

[Summary](#) 

Review and connect what you learned.

[Assignment](#) 

Practice with probabilities.

[Quiz Answers](#)

[Diagnostic PostTest](#)

[TEST Answers](#)