

HiSET® Math

Khan Academy Instructional Support Videos and Exercises

In collaboration with Khan Academy, the HiSET® program has identified videos and exercises available at www.khanacademy.org to support HiSET Math test preparation. We've collated the Office of Career, Technology and Adult Education (OCTAE) College and Career Readiness Standards online resources to provide you with targeted instructional support for the same standards the HiSET Math test assesses competency.

Mathematics: Number and Quantity

The Mathematics test assesses mathematical knowledge and competencies. The test measures a candidate's ability to solve quantitative problems using fundamental concepts and reasoning skills. The training videos can improve student's fundamental skills needed to be successful in the HiSET Math test's Number and Operations on Numbers content category.

The Real Numbers

Extend the properties of exponents to rational exponents

Topic	Tutorial Video	Tutorial Video 2
Introduction to exponents	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/introduction-to-exponents	
Raising a number to the 0th and 1st power	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/raising-a-number-to-the-0th-and-1st-power	
Patterns in raising 1 and -1 to different powers	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/powers-of-1-and-1	
Powers of fractions	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/powers-of-fractions	https://www.khanacademy.org/math/pre-algebra/exponents-radicals/World-of-exponents/v/powers-of-fractions
Powers of zero (V)	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/powers-of-zero	https://www.khanacademy.org/math/pre-algebra/exponents-radicals/World-of-exponents/v/powers-of-zero

Topic	Tutorial Video	Tutorial Video 2
Exponent example 1 (V)	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/understanding-exponents-2	https://www.khanacademy.org/math/pre-algebra/exponents-radicals/World-of-exponents/v/understanding-exponents-2
Exponent example 2 (V)	https://www.khanacademy.org/math/algebra-basics/core-algebra-foundations/world-of-exponents-college-readiness/v/understanding-exponents	https://www.khanacademy.org/math/pre-algebra/exponents-radicals/World-of-exponents/v/understanding-exponents
Positive and negative exponents (Ex)	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-pos-neg-exponents/e/exponents_2	https://www.khanacademy.org/math/pre-algebra/exponents-radicals/negative-exponents-tutorial/e/exponents_2
Extend the properties of exponents to rational exponents	https://www.khanacademy.org/math/algebra/exponent-equations/alg-integer-exponents/e/exponents_2	

Use properties of rational and irrational numbers

Topic	Tutorial Video	Tutorial Video 2
Recognizing irrational numbers	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-irrational-numbers/v/recognizing-irrational-numbers	https://www.khanacademy.org/math/algebra/ratio-proportion-topic/alg-rational-irrational-numbers/v/recognizing-irrational-numbers
Recognizing rational and irrational numbers	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-numbers-operations/cc-8th-irrational-numbers/e/recognizing-rational-and-irrational-numbers	https://www.khanacademy.org/math/algebra/ratio-proportion-topic/alg-rational-irrational-numbers/e/recognizing-rational-and-irrational-numbers

The Complex Number System

Perform arithmetic operations with complex numbers

Topic	Tutorial Video	Tutorial Video 2
Introduction to i and imaginary numbers	https://www.khanacademy.org/math/precalculus/imaginary_complex_precalc/i_precalc/v/introduction-to-i-and-imaginary-numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/imaginary_unit_i-a2/v/introduction-to-i-and-imaginary-numbers
Imaginary unit powers	https://www.khanacademy.org/math/precalculus/imaginary_complex_precalc/i_precalc/e/imaginary_unit_powers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/imaginary_unit_i-a2/e/imaginary_unit_powers

Topic	Tutorial Video	Tutorial Video 2
Introduction to complex numbers	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_num_precalc/v/complex-number-intro	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/v/introduction-to-complex-numbers
IIT JEE complex numbers Part 1	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_number_challenge/v/iit-jee-complex-numbers-part-1	
IIT JEE complex numbers Part 2	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_number_challenge/v/iit-jee-complex-numbers-part-2	
IIT JEE complex numbers Part 3	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_number_challenge/v/iit-jee-complex-numbers-part-3	
Adding complex numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/v/adding-complex-numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/v/adding-complex-numbers
Subtracting complex numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/v/subtracting-complex-numbers	
Adding and subtracting complex numbers	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_num_precalc/e/adding_and_subtracting_complex_numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/e/adding_and_subtracting_complex_numbers
Multiplying complex numbers	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/multiplying-dividing-complex/v/multiplying-complex-numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/v/multiplying-complex-numbers
Multiplying complex numbers	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/multiplying-dividing-complex/e/multiplying_complex_numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/e/multiplying_complex_numbers
Dividing complex numbers	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/multiplying-dividing-complex/v/dividing-complex-numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex-numbers/v/dividing-complex-numbers

Topic	Tutorial Video	Tutorial Video 2
Dividing complex numbers	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/multiplying-dividing-complex/e/dividing_complex_numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/e/dividing_complex_numbers
Absolute value of a complex number	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/v/absolute-value-of-a-complex-number	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/v/absolute-value-of-a-complex-number
Absolute value of a complex number	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/e/absolute_value_of_complex_numbers	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/e/absolute_value_of_complex_numbers

Represent complex numbers and their operations on the complex plane

Topic	Tutorial Video	Tutorial Video 2
Plotting complex numbers on the complex plane	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_num_precalc/v/plotting-complex-numbers-on-the-complex-plane	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/v/plotting-complex-numbers-on-the-complex-plane

Perform complex numbers and their operations on the complex plane

Topic	Tutorial Video	Tutorial Video 2
The complex plane	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_num_precalc/e/the_complex_plane	https://www.khanacademy.org/math/algebra2/complex-numbers-a2/complex_numbers/e/the_complex_plane
Complex number polar form intuition	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_analysis/e/complex_number_polar_form_intuition	
Complex plane operations	https://www.khanacademy.org/math/prec calculus/imaginary_complex_precalc/complex_num_precalc/e/complex_plane_operations	

Mathematics: Algebra

The HiSET exam contains Mathematics problems that test abstract concepts such as algebraic patterns. The training videos can help familiarize students with fundamental skills needed to be successful in the HiSET's Algebraic Concepts content category.

Seeing Structure in Expressions

Interpret the structure of expressions

Topic	Tutorial Video	Tutorial Video 2
Structure in expressions 1	https://www.khanacademy.org/math/algebra/linear_inequalities/structure-expressions-linear/e/structure-in-expressions-1	
Example 1: Factoring difference of squares	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-special-products/v/factoring-difference-of-squares	
Example 1: Factoring difference of squares	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-special-products/e/factoring_difference_of_squares_1	
Example 2: Factoring difference of squares	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-special-products/v/u09-l2-t1-we3-factoring-special-products-3	
Example 2: Factoring difference of squares	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-special-products/e/factoring_difference_of_squares_2	
Example 3: Factoring difference of squares	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-special-products/e/factoring_difference_of_squares_3	
Factoring polynomials by grouping	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-by-grouping/e/factoring_polynomials_by_grouping_1	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/e/factoring_polynomials_by_grouping_1
Factoring quadratics with two variables	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/factoring-quadratics-in-two-vari/e/factoring_polynomials_with_two_variables	

Topic	Tutorial Video	Tutorial Video 2
Factoring quadratic expressions	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/v/factoring-quadratic-expressions	
Examples: Factoring simple quadratics	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/v/factoring-polynomials-1	
Example 1: Factoring quadratics	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/e/factoring_polynomials_1	
Example 2: Factoring quadratics	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/e/factoring_polynomials_2	
Solving radical equations	https://www.khanacademy.org/math/algebra/exponent-equations/radical_equations/v/solving-radical-equations	

Write expressions in equivalent forms to solve problems

Topic	Tutorial Video	Tutorial Video 2
Solving quadratics by completing the square	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_formula_tutorial/v/solving-quadratic-equations-by-completing-the-square	
Example 1: Solving quadratics by completing the square	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_formula_tutorial/e/completing_the_square_1	
Example 2: Solving quadratics by completing the square	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_formula_tutorial/e/completing_the_square_2	
Solving a quadratic equation by factoring	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/v/example-1-solving-a-quadratic-equation-by-factoring	

Topic	Tutorial Video	Tutorial Video 2
Example 2: Solving a quadratic equation by factoring dimensions from volume of box	https://www.khanacademy.org/math/algebra/quadratics/factoring_quadratics/v/example-3-solving-a-quadratic-equation-by-factoring	
Example 1: Solving quadratics by factoring	https://www.khanacademy.org/math/algebra/quadratics/factoring_quadratics/e/solving_quadratics_by_factoring	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/e/solving_quadratics_by_factoring
Example 2: Solving quadratics by factoring	https://www.khanacademy.org/math/algebra/quadratics/factoring_quadratics/e/solving_quadratics_by_factoring_2	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/quad_factoring/e/solving_quadratics_by_factoring_2

Arithmetic with Polynomials and Rational Functions

Perform arithmetic operations on polynomials

Topic	Tutorial Video	Tutorial Video 2
Addition and subtraction of polynomials	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/polynomial_basics/v/addition-and-subtraction-of-polynomials	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/polynomial_tutorial/v/addition-and-subtraction-of-polynomials
Addition and subtraction of polynomials	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/polynomial_basics/e/adding_and_subtracting_polynomials	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/polynomial_tutorial/e/adding_and_subtracting_polynomials
Example 1: Multiplying binomials	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/multiplying-binomials/e/multiplying_expressions_0.5	
Example 2: Multiplying binomials	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/multiplying-binomials/e/multiplying_expressions_1	
Example 1: Multiplying a binomial by a polynomial	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/multiplying_polynomials/e/multiplying_polynomials	
Example 2: Multiplying a binomial by a polynomial	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/multiplying_polynomials/v/more-multiplying-polynomials	

Topic	Tutorial Video	Tutorial Video 2
Example 3: Multiplying a binomial by a polynomial	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/multiplying_polynomials/v/multiplying-polynomials-3	
Polynomial division	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/dividing_polynomials/v/polynomial-division	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/dividing_polynomials/v/polynomial-division
Polynomial divided by monomial	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/dividing_polynomials/v/polynomial-divided-by-monomial	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/dividing_polynomials/v/polynomial-divided-by-monomial
Example 1: Dividing polynomials	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/dividing_polynomials/v/dividing-polynomials-1	
Dividing polynomials with remainders	https://www.khanacademy.org/math/algebra/multiplying-factoring-expression/dividing_polynomials/v/dividing-polynomials-with-remainders	

Rewrite rational expressions

Topic	Tutorial Video	Tutorial Video 2
Simplifying rational expressions introduction	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/simplifying-rational-expressions/v/simplifying-rational-expressions-introduction	
Example 1: Simplifying rational expressions	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/simplifying-rational-expressions/v/simplifying-rational-expressions-1	
Example 2: Simplifying rational expressions	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/simplifying-rational-expressions/v/simplifying-rational-expressions-2	
Example 3: Simplifying rational expressions	https://www.khanacademy.org/math/algebra2/polynomial_and_rational/simplifying-rational-expressions/v/simplifying-rational-expressions-3	

Creating Equations

Create equations that describe numbers or relationships

Topic	Tutorial Video	Tutorial Video 2
Representing a relationship with a simple equation	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/why-of-algebra/v/representing-a-relationship-with-a-simple-equation	
Simple equations of the form $ax=b$	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/simple-equations	
Simple equations of the form $x/a=b$	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/solving-one-step-equations-2	
Simple equations of the form $x+a = b$	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/solving-one-step-equations	
One-step equations with addition and subtraction	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/e/one_step_equations	
Solving a more complicated equation	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/equations-2	
Solving two-step equations	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/two-step-equations	
Two-step equations example	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/v/solving-equations-1	
Two-step equations	https://www.khanacademy.org/math/algebra/solving-linear-equations-and-inequalities/equations_beginner/e/linear-equations_2	

Reasoning with Equations and Inequalities

Understand solving equations as a process of reasoning and explain the reasonings

Topic	Tutorial Video	Tutorial Video 2
Graphs of two-variable inequalities	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/graphing-linear-inequalities/e/graphing_inequalities_2	
Constraint solutions of two-variable inequalities	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/graphing-linear-inequalities/e/graphing_inequalities	

Solve equations and inequalities in one variable

Topic	Tutorial Video	Tutorial Video 2
Compound inequalities	https://www.khanacademy.org/math/algebra/linear_inequalities/compound_absolute_value_inequali/v/compound-inequalities	
Compound inequalities	https://www.khanacademy.org/math/algebra/linear_inequalities/compound_absolute_value_inequali/v/compound-inequalities	
Compound inequalities 2	https://www.khanacademy.org/math/algebra/linear_inequalities/compound_absolute_value_inequali/v/compound-inequalities-2	
Compound inequalities 3	https://www.khanacademy.org/math/algebra/linear_inequalities/compound_absolute_value_inequali/v/compound-inequalities-3	
Compound inequalities 4	https://www.khanacademy.org/math/algebra/linear_inequalities/compound_absolute_value_inequali/v/compound-inequalities-4	
Compound inequalities	https://www.khanacademy.org/math/algebra/linear_inequalities/compound_absolute_value_inequali/e/compound_inequalities	
Multi-step linear inequalities	https://www.khanacademy.org/math/algebra/linear_inequalities/inequalities/e/linear_inequalities	

Solve systems of equations

Topic	Tutorial Video	Tutorial Video 2
Solving systems of two linear equations	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/analyzing_the_solutions_to_systems_of_equations/e/systems_of_equations	
Solving systems of two linear equations example	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/analyzing_the_solutions_to_systems_of_equations/v/understanding-systems-of-equations-example-2	

Represent and solve equations and inequalities graphically

Topic	Tutorial Video	Tutorial Video 2
Solving linear systems by graphing	https://www.khanacademy.org/math/algebra-basics/core-algebra-systems/core-algebra-systems-tutorial/v/solving-linear-systems-by-graphing	
Checking solutions to systems of equations example	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/introduction_to_systems_of_linear_equations/v/testing-a-solution-for-a-system-of-equations	
Graphing systems of equations	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/v/graphings-systems-of-equations	
Graphing systems application problem	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/v/graphical-systems-application-problem	
Number of solutions to a system of equations	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/analyzing_the_solutions_to_systems_of_equations/v/solving-systems-by-graphing-2	
Graphically solving systems	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-systems-topic/cc-8th-systems-graphically/v/solving-systems-by-graphing-3	

Topic	Tutorial Video	Tutorial Video 2
Solving systems of equations graphically	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/systems-through-examples/v/solving-systems-graphically	
Solving systems of equations graphically	https://www.khanacademy.org/math/algebra/systems-of-eq-and-ineq/graphical_representation_of_systems_of_equations/e/graphing_systems_of_equations	

Data Analysis and Probability

The HiSET exam measures a student's ability to analyze data and use probability to solve problems. The training videos provide students practice in dealing with data analysis and probability.

Interpreting Functions

Understand the concept of a function and use function notation

Topic	Tutorial Video	Tutorial Video 2
What is a function?	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/what-is-a-function	
Difference between equations and functions	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/difference-between-equations-and-functions	
Testing if a relationship is a function	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/testing-if-a-relationship-is-a-function	
Relations and functions	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/relations-and-functions	https://www.khanacademy.org/math/algebra2/functions_and_graphs/function-introduction/v/relations-and-functions
Graphical relations and functions	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/graphical-relations-and-functions	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/graphical-relations-and-functions

Topic	Tutorial Video	Tutorial Video 2
Recognize functions from tables	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/functional-relationships-1 https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/functional-relationships-1	https://www.khanacademy.org/math/algebra/algebra-functions/recognizing-functions/v/functional-relationships-1
Recognizing functions from verbal descriptions example 1	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/recognizing-functions-example-1 https://www.khanacademy.org/math/algebra/algebra-functions/recognizing-functions/v/recognizing-functions-example-1	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/recognizing-functions-example-1
Recognizing functions from verbal descriptions example 2	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/recognizing-functions-example-5	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/recognizing-functions-example-5
Recognizing functions example 3	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/recognizing-functions-example-3	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/recognizing-functions-example-3
Recognizing functions example 4	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/recognizing-functions-example-4	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/recognizing-functions-example-4
Does a vertical line represent a function?	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/v/recognizing-functions-example-2	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/v/recognizing-functions-example-2
Recognizing functions from tables	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/e/recognizing_functions	
Recognizing functions from graphs 2	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/cc-8th-function-intro/e/recog-func-2	https://www.khanacademy.org/math/algebra2/functions_and_graphs/recognizing-functions-2/e/recog-func-2
Domain of a function	https://www.khanacademy.org/math/algebra2/functions_and_graphs/domain-range/v/domain-of-a-function	

Topic	Tutorial Video	Tutorial Video 2
Domain and range from graph	https://www.khanacademy.org/math/algebra2/functions_and_graphs/domain_range/e/domain_and_range_0.5	
Domain and range of a function	https://www.khanacademy.org/math/algebra2/functions_and_graphs/domain_range/v/domain-and-range-of-a-function	
Range of a function	https://www.khanacademy.org/math/algebra2/functions_and_graphs/domain_range/e/range_of_a_function	
Evaluating functions given their formula	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/understanding-function-notation-example-1 https://www.khanacademy.org/math/algebra/two-var-linear-equations-and-intro-to-functions/functions-and-function-notation/v/understanding-function-notation-example-1	https://www.khanacademy.org/math/algebra2/functions_and_graphs/function-introduction/v/understanding-function-notation-example-1
Function notation in context example	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/understanding-function-notation-example-3 https://www.khanacademy.org/math/algebra2/functions_and_graphs/function-introduction/v/understanding-function-notation-example-3	https://www.khanacademy.org/math/algebra/algebra-functions/functions-and-function%20notation/v/understanding-function-notation-example-3
Evaluating functions given their graph	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/understanding-function-notation-example-2 https://www.khanacademy.org/math/algebra/two-var-linear-equations-and-intro-to-functions/functions-and-function-notation/v/understanding-function-notation-example-2	https://www.khanacademy.org/math/algebra2/functions_and_graphs/function-introduction/v/understanding-function-notation-example-2

Topic	Tutorial Video	Tutorial Video 2
Evaluating functions	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/e/functions_1 https://www.khanacademy.org/math/algebra2/functions_and_graphs/function-introduction/e/functions_1	https://www.khanacademy.org/math/algebra/two-var-linear-equations-and-intro-to-functions/functions-and-function-notation/e/functions_1
Evaluating function expressions	https://www.khanacademy.org/math/algebra/algebra-functions/eval-function-expressions/e/functions_2 https://www.khanacademy.org/math/algebra2/functions_and_graphs/function-expressions/e/functions_2	https://www.khanacademy.org/math/algebra/two-var-linear-equations-and-intro-to-functions/functions-and-function-notation/e/functions_2

Analyze functions using different representations

Topic	Tutorial Video	Tutorial Video 2
Comparing features of functions 2 example 1	https://www.khanacademy.org/math/trigonometry/functions_and_graphs/analyzing_functions/v/comparing-features-of-functions-2-example-1	https://www.khanacademy.org/math/algebra2/functions_and_graphs/comparing-interpreting-functions/v/comparing-features-of-functions-2-example-1
Comparing features of functions 2 example 2	https://www.khanacademy.org/math/trigonometry/functions_and_graphs/analyzing_functions/v/comparing-features-of-functions-2-example-2	https://www.khanacademy.org/math/algebra2/functions_and_graphs/comparing-interpreting-functions/v/comparing-features-of-functions-2-example-2
Comparing features of functions 2 example 3	https://www.khanacademy.org/math/trigonometry/functions_and_graphs/analyzing_functions/v/comparing-features-of-functions-2-example-3	https://www.khanacademy.org/math/algebra2/functions_and_graphs/comparing-interpreting-functions/v/comparing-features-of-functions-2-example-3
Comparing features of functions	https://www.khanacademy.org/math/trigonometry/functions_and_graphs/analyzing_functions/e/comparing-features-of-functions-2	https://www.khanacademy.org/math/algebra2/functions_and_graphs/comparing-interpreting-functions/e/comparing-features-of-functions-2

Building Functions

Build a function that models a relationship between two quantities

Topic	Tutorial Video	Tutorial Video 2
Converting an explicit formula of a geometric sequence to a recursive formula	https://www.khanacademy.org/math/trigonometry/seq_induction/recursive-functions/v/converting-an-explicit-function-to-a-recursive-function	https://www.khanacademy.org/math/algebra/sequences/geometric_sequences/v/converting-an-explicit-function-to-a-recursive-function

Topic	Tutorial Video	Tutorial Video 2
Modeling with sequences	https://www.khanacademy.org/math/trigonometry/seq_induction/recursive-functions/e/recursive_explicit	https://www.khanacademy.org/math/algebra/sequences/modeling_with_sequences/e/recursive_explicit

Linear, Quadratic and Exponential Models

Construct and compare linear, quadratic and exponential models and solve problems

Topic	Tutorial Video	Tutorial Video 2
Comparing linear functions 1	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/comparing-features-of-functions-1	
Comparing linear functions 2	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/comparing-features-of-functions-3	
Comparing linear functions 3	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/comparing-features-of-functions-5	
Comparing linear functions	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-functions-and-function-notation/v/comparing-features-of-functions-5	

Mathematics: Geometry

The Mathematics test assesses mathematical knowledge and competencies related to Geometry. The training videos can improve a student's fundamental skills needed to be successful on the HiSET exam.

Congruence

Experiment with transformations in the plane

Topic	Tutorial Video	Tutorial Video 2
Testing congruence by transformations example	https://www.khanacademy.org/math/basic-geo/transformations-congruence-similarity-geo/basic-geo-congruence-similarity/v/testing-congruence-by-transformations-example	https://www.khanacademy.org/math/geometry/congruent-triangles/transformations-congruence/v/testing-congruence-by-transformations-example

Topic	Tutorial Video	Tutorial Video 2
Another congruence by transformations example	https://www.khanacademy.org/math/basic-geo/transformations-congruence-similarity-geo/basic-geo-congruence-similarity/v/another-congruence-by-transformation-example	https://www.khanacademy.org/math/geometry/congruent-triangles/transformations-congruence/v/another-congruence-by-transformation-example
Example of rigid transformation and congruence	https://www.khanacademy.org/math/geometry/congruent-triangles/transformations-congruence/v/example-of-rigid-transformation-and-congruence	
Another example of rigid transformations for congruence	https://www.khanacademy.org/math/geometry/congruent-triangles/transformations-congruence/v/another-example-of-rigid-transformations-for-congruence	
Defining congruence through rigid transformations	https://www.khanacademy.org/math/geometry/congruent-triangles/transformations-congruence/e/defining-congruence-through-rigid-transformations	
Exploring rigid transformations and congruence	https://www.khanacademy.org/math/basic-geo/transformations-congruence-similarity-geo/basic-geo-congruence-similarity/e/exploring-rigid-transformations-and-congruence	

Similarity, Right Triangles and Trigonometry

Prove theorems involving similarity

Topic	Tutorial Video	Tutorial Video 2
Testing similarity through transformations	https://www.khanacademy.org/math/basic-geo/transformations-congruence-similarity-geo/basic-geo-congruence-similarity/v/testing-similarity-through-transformations	https://www.khanacademy.org/math/geometry/similarity/similarity-and-transformations/v/testing-similarity-through-transformations
Exploring angle-preserving transformations and similarity	https://www.khanacademy.org/math/basic-geo/transformations-congruence-similarity-geo/basic-geo-congruence-similarity/e/exploring-angle-preserving-transformations-and-similarity	https://www.khanacademy.org/math/geometry/similarity/similarity-and-transformations/e/exploring-angle-preserving-transformations-and-similarity
Defining similarity through angle-preserving transformations	https://www.khanacademy.org/math/geometry/similarity/similarity-and-transformations/e/defining-similarity-through-angle-preserving-transformations	

Topic	Tutorial Video	Tutorial Video 2
Similarity postulates	https://www.khanacademy.org/math/geometry/similarity/triangle_similarity/v/similarity-postulates	
Pythagorean theorem proof using similarity	https://www.khanacademy.org/math/basic-geo/basic-geo-pythagorean-topic/basic-geo-pythagorean-proofs/v/pythagorean-theorem-proof-using-similarity	https://www.khanacademy.org/math/geometry/right_triangles_topic/pythagorean_proofs/v/pythagorean-theorem-proof-using-similarity

Geometric Measurement and Dimension

Explain volume formulas and use them to solve problems

Topic	Tutorial Video	Tutorial Video 2
Cylinder volume and surface area	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volumes/v/cylinder-volume-and-surface-area	https://www.khanacademy.org/math/geometry/basic-geometry/volume_tutorial/v/cylinder-volume-and-surface-area
Volume of a cone	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volumes/v/volume-cone-example	https://www.khanacademy.org/math/geometry/basic-geometry/volume_tutorial/v/volume-cone-example
Volume of a sphere	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volumes/v/volume-of-a-sphere	https://www.khanacademy.org/math/geometry/basic-geometry/volume_tutorial/v/volume-of-a-sphere
Volume word problems with cones, cylinders and spheres	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volumes/e/volume-word-problems-with-cones--cylinders--and-spheres	https://www.khanacademy.org/math/geometry/basic-geometry/volume_tutorial/e/volume-word-problems-with-cones--cylinders--and-spheres
Volume of a rectangular prism: fractional dimensions	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/v/volume-of-a-rectangular-prism-with-fractional-dimensions	
Volume with fractions	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/e/volume_with_fractions	
Volume of a rectangular prism: fractional cubes	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/v/volume-of-a-rectangular-prism-with-fractional-cubes	
Volume with unit cubes 2	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/e/volume_with_unit_cubes_2	

Topic	Tutorial Video	Tutorial Video 2
Volume of a rectangular prism: word problem	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/v/marbles-in-tank-volume	
Find the volume of a triangular prism and cube	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/v/solid-geometry-volume	https://www.khanacademy.org/math/geometry/basic-geometry/volume_tutorial/v/solid-geometry-volume
Volume word problems with fractions and decimals	https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volume/e/volume-word-problems-with-fractions	

Modeling with Geometry

Apply geometric concepts in modeling situations

Topic	Tutorial Video	Tutorial Video 2
Modeling with linear equations example 1	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-linear-functions-modeling/v/exploring-linear-relationships	
Modeling with linear equations example 2	https://www.khanacademy.org/math/cc-eighth-grade-math/cc-8th-linear-equations-functions/8th-linear-functions-modeling/v/word-problem-solving-4	