

OHEOC Tutorials for Ohio are designed specifically for the Ohio Learning Standards to prepare students for the Ohio End Of Course assessments. EOC Categories are at the heart of OHEOC Tutorial structure – bringing category-based learning to the student experience, and category-based performance and progress tracking to the teacher experience.

Math Tutorials offer targeted instruction, practice and review designed to develop computational fluency, deepen conceptual understanding, and apply mathematical practices. They automatically identify and address learning gaps down to elementary-level content, using adaptive remediation to bring students to grade-level no matter where they start. Students engage with the content in an interactive, feedback-rich environment as they progress through standards-aligned modules. By constantly honing the ability to apply their knowledge in abstract and real world scenarios, students build the depth of knowledge and higher order skills required to demonstrate their mastery when put to the test.

In each module, the Learn It and Try It make complex ideas accessible to students through focused content, modeled logic and process, multi-modal representations, and personalized feedback as students reason through increasingly challenging problems. The Review It offers a high impact summary of key concepts and relates those concepts to students' lives. The Test It assesses students' mastery of the module's concepts, providing granular performance data to students and teachers after each attempt. To help students focus on the content most relevant to them, unit-level pretests and posttests can quickly identify where students are strong and where they're still learning.

Test-Taking Strategies for EOC Tutorials allow students to practice and apply learning approaches that will hone their test-taking skills and focus them for success on the day of their EOC test.

Unit 1: Algebraic Expressions

- **LAWS OF EXPONENTS**
 - OH.Math.HSA.SSE.3c: Seeing Structure in Expressions Write expressions in equivalent forms to solve problems. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Use the properties of exponents to transform expressions for exponential functions.
- **FORMULATING AND SIMPLIFYING ALGEBRAIC EXPRESSIONS**
 - OH.Math.HSA.SSE.1a: Seeing Structure in Expressions Interpret the structure of expressions. Interpret expressions that represent a quantity in terms of its context. Interpret parts of an expression, such as terms, factors, and coefficients.

Unit 2: Solving Equations

- **ONE-STEP EQUATIONS AND INEQUALITIES**

- OH.Math.HSA.CED.1b: Creating Equations Create equations that describe numbers or relationships. Create equations and inequalities in one variable and use them to solve problems. Focus on applying simple quadratic expressions.

- **MULTI-STEP EQUATIONS AND INEQUALITIES**

- OH.Math.HSA.CED.1b: Creating Equations Create equations that describe numbers or relationships. Create equations and inequalities in one variable and use them to solve problems. Focus on applying simple quadratic expressions.

- **LITERAL EQUATIONS**

- OH.Math.HSA.CED.4c: Creating Equations Create equations that describe numbers or relationships. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. Focus on formulas in which the variable of interest is linear or square.

Unit 3: Functions

- **FUNCTIONS AND RELATIONS**

- OH.Math.HSF.IF.4b: Interpreting Functions Interpret functions that arise in applications in terms of the context. 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. Focus on linear, quadratic, and exponential functions.

- **DOMAIN AND RANGE**

- OH.Math.HSF.IF.5b: Interpreting Functions Interpret functions that arise in applications in terms of the context. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. Focus on linear, quadratic, and exponential functions.

- **MULTIPLE REPRESENTATIONS OF FUNCTIONS**

- OH.Math.HSF.IF.9b: Interpreting Functions Analyze functions using different representations. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). Focus on linear, quadratic, and exponential functions.

Unit 4: Exponential Functions

- **EXPONENTIAL FUNCTIONS**

- OH.Math.HSF.IF.8b.i: Interpreting Functions Analyze functions using different representations. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions. Focus on exponential functions evaluated at integer inputs.
- OH.Math.HSF.BF.1a.ii: Building Functions Build a function that models a relationship between two quantities. Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from context. Focus on situations that exhibit quadratic or exponential relationships.

- **EXPONENTIAL GROWTH AND DECAY**

- OH.Math.HSF.IF.8b.i: Interpreting Functions Analyze functions using different representations. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the properties of exponents to interpret expressions for exponential functions. Focus on exponential functions evaluated at integer inputs.
- OH.Math.HSF.LE.3: Linear, Quadratic, and Exponential Models Construct and compare linear, quadratic, and exponential models, and solve problems. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically.

Unit 5: Polynomials

- **ADDITION AND SUBTRACTION OF POLYNOMIALS**

- OH.Math.HSA.APR.1a: Arithmetic with Polynomials and Rational Expressions Perform arithmetic operations on polynomials. Understand that polynomials form a system analogous to the integers, namely, that they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. Focus on polynomial expressions that simplify to forms that are linear or quadratic.

- **MULTIPLICATION OF POLYNOMIALS**

- OH.Math.HSA.APR.1a: Arithmetic with Polynomials and Rational Expressions Perform arithmetic operations on polynomials. Understand that polynomials form a system analogous to the integers, namely, that they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials. Focus on polynomial expressions that simplify to forms that are linear or quadratic.

Unit 6: Factoring

- **FACTORING QUADRATIC TRINOMIALS**

- OH.Math.HSA.SSE.3a: Seeing Structure in Expressions Write expressions in equivalent forms to solve problems. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Factor a quadratic expression to reveal the zeros of the function it defines.
- OH.Math.HSA.SSE.2: Seeing Structure in Expressions Interpret the structure of expressions. Use the structure of an expression to identify ways to rewrite it.

- **FACTORING SPECIAL CASES**

- OH.Math.HSA.SSE.2: Seeing Structure in Expressions Interpret the structure of expressions. Use the structure of an expression to identify ways to rewrite it.
- OH.Math.HSA.SSE.3a: Seeing Structure in Expressions Write expressions in equivalent forms to solve problems. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Factor a quadratic expression to reveal the zeros of the function it defines.

Unit 7: Quadratic Functions

- **QUADRATIC FUNCTIONS**

- OH.Math.HSF.IF.7b: Interpreting Functions Analyze functions using different representations. Graph functions expressed symbolically and indicate key features of the graph, by hand in simple cases and using technology for more complicated cases. Include applications and how key features relate to characteristics of a situation, making selection of a particular type of function model appropriate. Graph quadratic functions and indicate intercepts, maxima, and minima.
- OH.Math.HSF.IF.4b: Interpreting Functions Interpret functions that arise in applications in terms of the context. 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. Focus on linear, quadratic, and exponential functions.
- **QUADRATIC PARENT FUNCTION**
 - OH.Math.HSF.IF.4b: Interpreting Functions Interpret functions that arise in applications in terms of the context. 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. Focus on linear, quadratic, and exponential functions.
 - OH.Math.HSF.IF.5b: Interpreting Functions Interpret functions that arise in applications in terms of the context. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. Focus on linear, quadratic, and exponential functions.
- **ANALYZING GRAPHS OF QUADRATIC FUNCTIONS**
 - OH.Math.HSF.BF.3a: Building Functions Build new functions from existing functions. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $f(x) - k$, $f(kx)$, 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. Focus on transformations of graphs of quadratic functions, except for $f(x) = a(x - h)^2 + k$.
 - OH.Math.HSF.IF.7b: Interpreting Functions Analyze functions using different representations. Graph functions expressed symbolically and indicate key features of the graph, by hand in simple cases and using technology for more complicated cases. Include applications and how key features relate to characteristics of a situation, making selection of a particular type of function model appropriate. Graph quadratic functions and indicate intercepts, maxima, and minima.
- **TRANSFORMATIONS OF THE QUADRATIC PARENT FUNCTION**
 - OH.Math.HSF.BF.3a: Building Functions Build new functions from existing functions. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $f(x) - k$, $f(kx)$, 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. Focus on transformations of graphs of quadratic functions, except for $f(x) = a(x - h)^2 + k$.

Unit 8: Solving Quadratic Equations

- **REPRESENTATIONS OF QUADRATIC FUNCTIONS**

- OH.Math.HSA.CED.2b: Creating Equations Create equations that describe numbers or relationships. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. Focus on applying simple quadratic expressions.
- OH.Math.HSF.BF.1a.ii: Building Functions Build a function that models a relationship between two quantities. Write a function that describes a relationship between two quantities. Determine an explicit expression, a recursive process, or steps for calculation from context. Focus on situations that exhibit quadratic or exponential relationships.
- OH.Math.HSA.SSE.1b: Seeing Structure in Expressions Interpret the structure of expressions. Interpret expressions that represent a quantity in terms of its context. Interpret complicated expressions by viewing one or more of their parts as a single entity.
- **SOLVING QUADRATIC EQUATIONS BY FACTORING**
 - OH.Math.HSA.REI.4b: Reasoning with Equations and Inequalities Solve equations and inequalities in one variable. Solve quadratic equations in one variable. Solve quadratic equations as appropriate to the initial form of the equation by inspection, e.g., for $x = 49$; taking square roots; completing the square; applying the quadratic formula; or utilizing the Zero-Product Property after factoring.
 - OH.Math.HSF.IF.8a.i: Interpreting Functions Analyze functions using different representations. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. Focus on completing the square to quadratic functions with the leading coefficient of 1.
- **COMPLETING THE SQUARE**
 - OH.Math.HSA.REI.4b: Reasoning with Equations and Inequalities Solve equations and inequalities in one variable. Solve quadratic equations in one variable. Solve quadratic equations as appropriate to the initial form of the equation by inspection, e.g., for $x = 49$; taking square roots; completing the square; applying the quadratic formula; or utilizing the Zero-Product Property after factoring.
 - OH.Math.HSF.IF.8a.i: Interpreting Functions Analyze functions using different representations. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context. Focus on completing the square to quadratic functions with the leading coefficient of 1.
 - OH.Math.HSA.REI.4a: Reasoning with Equations and Inequalities Solve equations and inequalities in one variable. Solve quadratic equations in one variable. Use the method of completing the square to transform any quadratic equation in $ax^2 + bx + c = 0$ into an equation of the form $(x - p)^2 = q$ that has the same solutions.
 - OH.Math.HSA.SSE.3b: Seeing Structure in Expressions Write expressions in equivalent forms to solve problems. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.

Unit 9: Quadratic Formula

- **QUADRATIC FORMULA**

- OH.Math.HSA.REI.4b: Reasoning with Equations and Inequalities Solve equations and inequalities in one variable. Solve quadratic equations in one variable. Solve quadratic equations as appropriate to the initial form of the equation by inspection, e.g., for $x^2 = 49$; taking square roots; completing the square; applying the quadratic formula; or utilizing the Zero-Product Property after factoring.

Unit 10: Systems of Nonlinear Equations

- **SYSTEMS OF NONLINEAR EQUATIONS**

- OH.Math.HSA.REI.7: Reasoning with Equations and Inequalities Solve systems of equations. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.
- OH.Math.HSA.REI.11: Reasoning with Equations and Inequalities Represent and solve equations and inequalities graphically. Explain why the x -coordinates of the points where the graphs of the equation $y = f(x)$ 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, making tables of values, or finding successive approximations.

Unit 11: Coordinate Geometry

- **CONJECTURES IN COORDINATE GEOMETRY**

- OH.Math.HSG.GPE.4: Expressing Geometric Properties with Equations Use coordinates to prove simple geometric theorems algebraically and to verify specific geometric statements. Use coordinates to prove simple geometric theorems algebraically and to verify geometric relationships algebraically, including properties of special triangles, quadrilaterals, and circles.

Unit 12: Conic Sections

- **CIRCLES**

- OH.Math.HSG.GPE.1: Expressing Geometric Properties with Equations Translate between the geometric description and the equation for a conic section. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
- OH.Math.HSG.GMD.4: Geometric Measurement and Dimension Visualize relationships between two-dimensional and three-dimensional objects. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

- **PARABOLAS**

- OH.Math.HSG.GMD.4: Geometric Measurement and Dimension Visualize relationships between two-dimensional and three-dimensional objects. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

Unit 13: Geometric Transformations

- **TRANSFORMATIONS ON THE COORDINATE PLANE**

- OH.Math.HSG.GMD.5: Geometric Measurement and Dimension Understand the relationships between lengths, area, and volumes. Understand how and when changes to the measures of a figure (lengths

or angles) result in similar and non-similar figures.

- OH.Math.HSG.SRT.1a: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Verify experimentally the properties of dilations given by a center and a scale factor: A dilation takes a line not passing through the center of the dilation to a parallel line and leaves a line passing through the center unchanged.
- OH.Math.HSG.SRT.1b: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Verify experimentally the properties of dilations given by a center and a scale factor: The dilation of a line segment is longer or shorter in the ratio given by the scale factor.

- **DILATIONS, TRANSLATIONS, ROTATIONS, AND REFLECTIONS**

- OH.Math.HSG.GMD.5: Geometric Measurement and Dimension Understand the relationships between lengths, area, and volumes. Understand how and when changes to the measures of a figure (lengths or angles) result in similar and non-similar figures.
- OH.Math.HSG.SRT.1a: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Verify experimentally the properties of dilations given by a center and a scale factor: A dilation takes a line not passing through the center of the dilation to a parallel line and leaves a line passing through the center unchanged.
- OH.Math.HSG.SRT.1b: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Verify experimentally the properties of dilations given by a center and a scale factor: The dilation of a line segment is longer or shorter in the ratio given by the scale factor.

Unit 14: Congruence and Similarity

- **TRIANGLES AND CONGRUENCE TRANSFORMATIONS**

- OH.Math.HSG.SRT.5: Similarity, Right Triangles, and Trigonometry Prove and apply theorems both formally and informally involving similarity using a variety of methods. Use congruence and similarity criteria for triangles to solve problems and to justify relationships in geometric figures that can be decomposed into triangles.

- **TRIANGLES AND SIMILARITY TRANSFORMATIONS**

- OH.Math.HSG.SRT.2: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
- OH.Math.HSG.SRT.3: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.
- OH.Math.HSG.SRT.5: Similarity, Right Triangles, and Trigonometry Prove and apply theorems both formally and informally involving similarity using a variety of methods. Use congruence and similarity criteria for triangles to solve problems and to justify relationships in geometric figures that can be decomposed into triangles.

- OH.Math.HSG.SRT.4: Similarity, Right Triangles, and Trigonometry Prove and apply theorems both formally and informally involving similarity using a variety of methods. Prove and apply theorems about triangles.

- **SIMILARITY OF OTHER POLYGONS**

- OH.Math.HSG.SRT.2: Similarity, Right Triangles, and Trigonometry Understand similarity in terms of similarity transformations. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.

Unit 15: Triangle Theorems

- **TRIANGLE ANGLE THEOREMS**

- OH.Math.HSG.SRT.4: Similarity, Right Triangles, and Trigonometry Prove and apply theorems both formally and informally involving similarity using a variety of methods. Prove and apply theorems about triangles.

Unit 16: Triangles and Trigonometry

- **THE PYTHAGOREAN THEOREM**

- OH.Math.HSG.SRT.8a: Similarity, Right Triangles, and Trigonometry Define trigonometric ratios, and solve problems involving right triangles. Solve problems involving right triangles. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems if one of the two acute angles and a side length is given.
- OH.Math.HSG.SRT.4: Similarity, Right Triangles, and Trigonometry Prove and apply theorems both formally and informally involving similarity using a variety of methods. Prove and apply theorems about triangles.

- **TRIGONOMETRIC RATIOS**

- OH.Math.HSG.SRT.7: Similarity, Right Triangles, and Trigonometry Define trigonometric ratios, and solve problems involving right triangles. Explain and use the relationship between the sine and cosine of complementary angles.
- OH.Math.HSG.SRT.6: Similarity, Right Triangles, and Trigonometry Define trigonometric ratios, and solve problems involving right triangles. 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.
- OH.Math.HSG.SRT.8a: Similarity, Right Triangles, and Trigonometry Define trigonometric ratios, and solve problems involving right triangles. Solve problems involving right triangles. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems if one of the two acute angles and a side length is given.

Unit 17: Circles

- **CENTRAL ANGLES, INSCRIBED ANGLES, AND CHORDS**

- OH.Math.HSG.C.5a: Circles Find arc lengths and areas of sectors of circles. Find arc lengths and areas of sectors of circles. Apply similarity to relate the length of an arc intercepted by a central angle to the

radius. Use the relationship to solve problems.

- **CONGRUENT AND SIMILAR CIRCLES**

- OH.Math.HSG.C.1: Circles Understand and apply theorems about circles. Prove that all circles are similar using transformational arguments.

- **CIRCUMFERENCE AND ARC LENGTH**

- OH.Math.HSG.GMD.1: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Give an informal argument for the formulas for the circumference of a circle, area of a circle, and volume of a cylinder, pyramid, and cone.

- **AREA OF CIRCLES AND SECTORS**

- OH.Math.HSG.GMD.1: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Give an informal argument for the formulas for the circumference of a circle, area of a circle, and volume of a cylinder, pyramid, and cone.
- OH.Math.HSG.C.5b: Circles Find arc lengths and areas of sectors of circles. Find arc lengths and areas of sectors of circles. Derive the formula for the area of a sector, and use it to solve problems.

Unit 18: Volume

- **VOLUME OF PRISMS AND PYRAMIDS**

- OH.Math.HSG.GMD.3: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
- OH.Math.HSG.MG.1: Modeling with Geometry Apply geometric concepts in modeling situations. Use geometric shapes, their measures, and their properties to describe objects, e.g., modeling a tree trunk or a human torso as a cylinder.
- OH.Math.HSG.GMD.1: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Give an informal argument for the formulas for the circumference of a circle, area of a circle, and volume of a cylinder, pyramid, and cone.
- OH.Math.HSG.GMD.4: Geometric Measurement and Dimension Visualize relationships between two-dimensional and three-dimensional objects. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

- **VOLUME OF CYLINDERS AND CONES**

- OH.Math.HSG.GMD.3: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
- OH.Math.HSG.MG.1: Modeling with Geometry Apply geometric concepts in modeling situations. Use geometric shapes, their measures, and their properties to describe objects, e.g., modeling a tree trunk or a human torso as a cylinder.

- OH.Math.HSG.GMD.1: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Give an informal argument for the formulas for the circumference of a circle, area of a circle, and volume of a cylinder, pyramid, and cone.
- OH.Math.HSG.GMD.4: Geometric Measurement and Dimension Visualize relationships between two-dimensional and three-dimensional objects. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
- **VOLUME OF COMPOSITE SOLIDS**
 - OH.Math.HSG.GMD.4: Geometric Measurement and Dimension Visualize relationships between two-dimensional and three-dimensional objects. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
 - OH.Math.HSG.GMD.3: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.
 - OH.Math.HSG.GMD.1: Geometric Measurement and Dimension Explain volume formulas, and use them to solve problems. Give an informal argument for the formulas for the circumference of a circle, area of a circle, and volume of a cylinder, pyramid, and cone.
 - OH.Math.HSG.MG.1: Modeling with Geometry Apply geometric concepts in modeling situations. Use geometric shapes, their measures, and their properties to describe objects, e.g., modeling a tree trunk or a human torso as a cylinder.
 - OH.Math.HSG.MG.3: Modeling with Geometry Apply geometric concepts in modeling situations. Apply geometric methods to solve design problems, e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios.

Unit 19: Probability

- **INTRODUCTION TO PROBABILITY**
 - OH.Math.HSS.CP.2: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Understand that two events A and B are independent if and only if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.
 - OH.Math.HSS.CP.1: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (or, and, not).
 - OH.Math.HSS.CP.3: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.

- OH.Math.HSS.CP.7: Conditional Probability and the Rules of Probability Use the rules of probability to compute probabilities of compound events in a uniform probability model. Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.
- **CONDITIONAL PROBABILITY**
 - OH.Math.HSS.CP.3: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.
 - OH.Math.HSS.CP.1: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (or, and, not).
 - OH.Math.HSS.CP.5: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.
 - OH.Math.HSS.CP.4: Conditional Probability and the Rules of Probability Understand independence and conditional probability, and use them to interpret data. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities.
 - OH.Math.HSS.CP.6: Conditional Probability and the Rules of Probability Use the rules of probability to compute probabilities of compound events in a uniform probability model. Find the conditional probability of A given B as the fraction of Bs outcomes that also belong to A, and interpret the answer in terms of the model.

Unit 20: Test-Taking Strategies

- **STUDY HABITS**
- **BEING PREPARED AND GETTING STARTED**
- **WORDING IN TEST QUESTIONS**
- **WORDING IN ANSWER CHOICES**
- **QUESTIONS WITH PASSAGES AND VISUAL DATA**
- **ESSAY AND SHORT ANSWER QUESTIONS**
- **WORD PROBLEMS**