STAAR EOC Tutorials for Texas are designed specifically for the Texas Essential Knowledge and Skills (TEKS) to prepare students for the State of Texas Assessment of Academic Readiness (STAAR)® end-of-course assessments. EOC Categories are at the heart of STAAR EOC Tutorial structure – bringing category-based learning to the student experience, and category-based performance and progress tracking to the teacher experience.

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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: Ratios, Rates, and Percentages

- **RATIOS**
  - 1.6.4.C: give examples of ratios as multiplicative comparisons of two quantities describing the same attribute;
  - 2.6.5.A: represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions; and

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- 2.6.4.B: apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates.

- **RATES AND UNIT RATES**
  - 1.6.4.D: give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients;
  - 2.6.4.B: apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates.
  - 2.6.5.A: represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions; and
- **SOLVING PERCENT PROBLEMS**
  - 1.6.4.E: represent ratios and percents with concrete models, fractions, and decimals;
  - 1.6.4.F: represent benchmark fractions and percents such as 1, 10, 25, 33 1/3, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers; and
  - 1.6.4.G: generate equivalent forms of fractions, decimals, and percents using real-world problems, including problems that involve money.
  - 2.6.5.B: solve real-world problems to find the whole given a part and the percent, to find the part given the whole and the percent, and to find the percent given the part and the whole, including the use of concrete and pictorial models.
  - 1.6.5.C: use equivalent fractions, decimals, and percents to show equal parts of the same whole.
  - 1.6.4.F: represent benchmark fractions and percents such as 1, 10, 25, 33 1/3, and multiples of these values using 10 by 10 grids, strip diagrams, number lines, and numbers; and

Unit 2: Unit Conversions

- **UNIT CONVERSIONS**
  - 2.6.4.B: apply qualitative and quantitative reasoning to solve prediction and comparison of real-world problems involving ratios and rates.
  - 3.6.4.H: convert units within a measurement system, including the use of proportions and unit rates.
  - 2.6.5.A: represent mathematical and real-world problems involving ratios and rates using scale factors, tables, graphs, and proportions; and

Unit 3: Signed Numbers and Absolute Value

- **SIGNED NUMBERS**
  - 1.6.2.B: identify a number, its opposite, and its absolute value;
  - 1.6.2.C: locate, compare, and order integers and rational numbers using a number line;
- **ABSOLUTE VALUE**
  - 1.6.2.B: identify a number, its opposite, and its absolute value;
- **INEQUALITIES AND COMPARISON**

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- 1.6.2.C: locate, compare, and order integers and rational numbers using a number line;

Unit 4: Plotting Points in the Coordinate Plane

- **PLOTTING POINTS IN THE COORDINATE PLANE**
  - 1.6.2.C: locate, compare, and order integers and rational numbers using a number line;
  - 3.6.11.A: graph points in all four quadrants using ordered pairs of rational numbers.

Unit 5: Expressions

- **EQUIVALENT EXPRESSIONS**
  - 1.6.7.C: determine if two expressions are equivalent using concrete models, pictorial models, and algebraic representations; and
  - 1.6.7.D: generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties.
- **EVALUATING EXPRESSIONS**
  - 1.6.7.A: generate equivalent numerical expressions using order of operations, including whole number exponents and prime factorization;

Unit 6: Solving Equations

- **INDEPENDENT AND DEPENDENT VARIABLES**
  - 2.6.6.A: identify independent and dependent quantities from tables and graphs;
- **SOLVING ADDITION EQUATIONS**
  - 2.6.6.C: represent a given situation using verbal descriptions, tables, graphs, and equations in the form y = kx or y = x + b.
  - 2.6.9.A: write one-variable, one-step equations and inequalities to represent constraints or conditions within problems;
  - 2.6.10.A: model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts; and
  - 2.6.10.B: determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.
- **SOLVING MULTIPLICATION EQUATIONS**
  - 2.6.6.C: represent a given situation using verbal descriptions, tables, graphs, and equations in the form y = kx or y = x + b.
  - 2.6.10.B: determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.
  - 2.6.9.A: write one-variable, one-step equations and inequalities to represent constraints or conditions within problems;
  - 2.6.10.A: model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts; and
- **MULTIPLE REPRESENTATIONS: TABLES, GRAPHS, AND EQUATIONS**

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- 2.6.6.C: represent a given situation using verbal descriptions, tables, graphs, and equations in the form y = kx or y = x + b.
- 2.6.6.A: identify independent and dependent quantities from tables and graphs;
- 2.6.6.B: write an equation that represents the relationship between independent and dependent quantities from a table; and

Unit 7: Solving Inequalities

- **SOLVING INEQUALITIES**
  - 2.6.10.B: determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.
  - 2.6.9.B: represent solutions for one-variable, one-step equations and inequalities on number lines; and
- **FORMULATING AND SOLVING INEQUALITIES FROM WORD PROBLEMS**
  - 2.6.9.A: write one-variable, one-step equations and inequalities to represent constraints or conditions within problems;
  - 2.6.9.B: represent solutions for one-variable, one-step equations and inequalities on number lines; and
  - 2.6.10.A: model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts; and

Unit 8: Solutions of Equations and Inequalities

- **SOLUTIONS OF EQUATIONS AND INEQUALITIES**
  - 1.6.7.B: distinguish between expressions and equations verbally, numerically, and algebraically;
  - 2.6.10.B: determine if the given value(s) make(s) one-variable, one-step equations or inequalities true.

Unit 9: Adding and Subtracting Rational Numbers

- **ADDING RATIONAL NUMBERS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;
  - 2.6.3.D: add, subtract, multiply, and divide integers fluently; and
- **SUBTRACTING RATIONAL NUMBERS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;
  - 2.6.3.D: add, subtract, multiply, and divide integers fluently; and
- **USING PROPERTIES TO ADD AND SUBTRACT RATIONAL NUMBERS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;

Unit 10: Multiplying and Dividing Rational Numbers

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- **MULTIPLYING RATIONAL NUMBERS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;
  - 2.6.3.E: multiply and divide positive rational numbers fluently.
  - 2.6.3.D: add, subtract, multiply, and divide integers fluently; and
- **DIVIDING RATIONAL NUMBERS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;
  - 2.6.3.D: add, subtract, multiply, and divide integers fluently; and
  - 2.6.3.E: multiply and divide positive rational numbers fluently.
- **USING PROPERTIES TO MULTIPLY AND DIVIDE RATIONAL NUMBERS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;

Unit 11: Operations with Fractions and Decimals

- **DIVIDING FRACTIONS**
  - 2.6.3.A: recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values;
  - 2.6.3.E: multiply and divide positive rational numbers fluently.
- **SOLVING PROBLEMS BY DIVIDING FRACTIONS**
  - 2.6.3.E: multiply and divide positive rational numbers fluently.
- **DECIMAL OPERATIONS**
  - 2.6.3.C: represent integer operations with concrete models and connect the actions with the models to standardized algorithms;
  - 2.6.3.E: multiply and divide positive rational numbers fluently.

Unit 12: Geometry

- **ANGLE RELATIONSHIPS IN TRIANGLES**
  - 3.6.8.A: extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle;
- **GEOMETRIC DRAWINGS**
  - 3.6.8.A: extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle;

Unit 13: Area and Volume

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- **AREA**
  - 3.6.8.B: model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes;
  - 3.6.8.C: write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers; and
  - 3.6.8.D: determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.
- **VOLUME**
  - 3.6.8.C: write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers; and
  - 3.6.8.D: determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers.

Unit 14: Introduction to Statistics

- **STATISTICAL QUESTIONS AND DATA DISTRIBUTIONS**
  - 4.6.13.B: distinguish between situations that yield data with and without variability.
  - 4.6.12.B: use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution;
  - 4.6.12.C: summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution; and
- **MEASURES OF CENTER AND VARIABILITY**
  - 4.6.12.C: summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution; and

Unit 15: Data Displays

- **BOX PLOTS**
  - 4.6.12.A: represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;
  - 4.6.12.C: summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution; and
  - 4.6.13.A: interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots; and

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- **DOT PLOTS AND HISTOGRAMS**
  - 4.6.12.A: represent numeric data graphically, including dot plots, stem-and-leaf plots, histograms, and box plots;
  - 4.6.12.C: summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution; and
  - 4.6.13.A: interpret numeric data summarized in dot plots, stem-and-leaf plots, histograms, and box plots; and

Unit 16: Summarizing Data

- **FREQUENCY TABLES**
  - 4.6.12.D: summarize categorical data with numerical and graphical summaries, including the mode, the percent of values in each category (relative frequency table), and the percent bar graph, and use these summaries to describe the data distribution.
- **SUMMARIZING DATA USING MEASURES OF CENTER AND VARIABILITY**
  - 4.6.12.C: summarize numeric data with numerical summaries, including the mean and median (measures of center) and the range and interquartile range (IQR) (measures of spread), and use these summaries to describe the center, spread, and shape of the data distribution; and
  - 4.6.12.B: use the graphical representation of numeric data to describe the center, spread, and shape of the data distribution;

Unit 17: 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**

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