

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.

## 1. RATE, RATIO, AND PROPORTION

- **UNIT RATES**

- **2.7.4.B** calculate unit rates from rates in mathematical and real-world problems;

- **USING PROPORTIONS TO SOLVE PROBLEMS**

- **2.7.4.D** solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems.

## 2. UNIT CONVERSIONS

- **UNIT CONVERSIONS**

- **3.7.4.E** convert between measurement systems, including the use of proportions and the use of unit rates.

## 3. PROPORTIONAL REASONING

- **ANALYZING PROPORTIONAL RELATIONSHIPS**

- **2.7.4.C** determine the constant of proportionality ( $k = y/x$ ) within mathematical and real-world problems; and
- **2.7.4.A** represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including  $d = rt$ ;

- **REPRESENTING PROPORTIONAL RELATIONSHIPS**

- **2.7.4.A** represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric,

graphical, and algebraic representations, including  $d = rt$ ;

- **2.7.4.C** determine the constant of proportionality ( $k = y/x$ ) within mathematical and real-world problems; and

## 4. ADDITION AND SUBTRACTION OF RATIONAL NUMBERS

- **ADDING RATIONAL NUMBERS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

- **SUBTRACTING RATIONAL NUMBERS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

## 5. MULTIPLICATION AND DIVISION OF RATIONAL NUMBERS

- **MULTIPLYING RATIONAL NUMBERS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

- **DIVIDING RATIONAL NUMBERS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

- **USING OPERATIONS ON RATIONAL NUMBERS TO SOLVE PROBLEMS**

- **2.7.3.B** apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.

## 6. OPERATIONS WITH FRACTIONS AND DECIMALS

- **DIVIDING FRACTIONS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

- **SOLVING PROBLEMS BY DIVIDING FRACTIONS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

- **DECIMAL OPERATIONS**

- **2.7.3.A** add, subtract, multiply, and divide rational numbers fluently; and

## 7. EQUATIONS AND INEQUALITIES

- **SOLUTIONS OF EQUATIONS AND INEQUALITIES**

- **2.7.11.B** determine if the given value(s) make(s) one-variable, two-step equations and inequalities true.

- **SOLVING TWO-STEP EQUATIONS**

- **2.7.11.A** model and solve one-variable, two-step equations and inequalities; and
- **2.7.10.A** write one-variable, two-step equations and inequalities to represent constraints or conditions within problems;

- **SOLVING LINEAR INEQUALITIES**

- **2.7.10.B** represent solutions for one-variable, two-step equations and inequalities on number lines; and
- **2.7.10.A** write one-variable, two-step equations and inequalities to represent constraints or conditions within problems;
- **2.7.11.A** model and solve one-variable, two-step equations and inequalities; and

## 8. FUNCTIONS

- **SLOPE-INTERCEPT FORM**

- **2.7.7.A** represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form  $y = mx + b$ .

- **WRITING LINEAR FUNCTIONS**

- **2.7.7.A** represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form  $y = mx + b$ .

## 9. SIMILARITY AND SCALE DRAWINGS

- **SIMILARITY AND DILATIONS**

- **3.7.5.A** generalize the critical attributes of similarity, including ratios within and between similar shapes;
- **3.7.5.C** solve mathematical and real-world problems involving similar shape and scale drawings.

- **SCALE DRAWINGS**

- **3.7.5.C** solve mathematical and real-world problems involving similar shape and scale drawings.

## 10. ANGLE RELATIONSHIPS

- **ANGLE RELATIONSHIPS IN TRIANGLES**

- **3.7.11.C** write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships.

- **PARALLEL LINES AND ANGLE RELATIONSHIPS**

- **3.7.11.C** write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships.

## 11. GEOMETRY IN TWO AND THREE DIMENSIONS

- **AREA, VOLUME, AND SURFACE AREA**

- **3.7.9.C** determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles; and
- **3.7.9.A** solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids;
- **3.7.9.D** solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net.

- **CIRCLES**

- **3.7.5.B** describe  $\pi$  as the ratio of the circumference of a circle to its diameter; and
- **3.7.9.B** determine the circumference and area of circles;

## 12. STATISTICS AND SAMPLING

- **POPULATIONS AND SAMPLES**

- **4.7.12.B** use data from a random sample to make inferences about a population; and

- **COMPARING DATA SETS VISUALLY**

- **4.7.6.G** solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents.
- **4.7.12.A** compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads;

- **USING STATISTICAL MEASURES TO COMPARE DATA SETS**

- **4.7.12.A** compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads;

## 13. PROBABILITY

- **CALCULATING PROBABILITY**

- **1.7.6.C** make predictions and determine solutions using experimental data for simple and compound events;
- **1.7.6.D** make predictions and determine solutions using theoretical probability for simple and compound events;
- **1.7.6.I** determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces.

- **PROBABILITY OF COMPOUND EVENTS**

- **1.7.6.D** make predictions and determine solutions using theoretical probability for simple and compound events;
- **1.7.6.I** determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces.
- **1.7.6.A** represent sample spaces for simple and compound events using lists and tree diagrams;

## 14. 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**