MCAP EOC Tutorials for Maryland are designed specifically for the Maryland College and Career Ready Standards to prepare students for the Maryland Comprehensive Assessment Program (MCAP). EOC Categories are at the heart of MCAP EOC 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.

1. MONITORING PRECISION AND ACCURACY

- **MONITORING PRECISION AND ACCURACY**

2. RATIONAL RELATIONSHIPS

- **OPERATIONS WITH RATIONAL EXPRESSIONS**
  - **A.REI.A.2** *Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.*
  - **A.APR.D.6** *Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.*

- **SOLVING RATIONAL EQUATIONS**
  - **A.REI.A.2** *Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.*
  - **A.CED.A.1** *Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*

3. TWO-VARIABLE LINEAR SYSTEMS 1

- **SOLVING SYSTEMS OF LINEAR EQUATIONS: GRAPHING**
  - **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*

4. TWO-VARIABLE LINEAR SYSTEMS 2

- **SOLVING SYSTEMS OF LINEAR EQUATIONS: SUBSTITUTION**

- **A2.M.6** *Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in the standards.*
- **A2.R.2** *Given a system of equations, reason about the number of solutions.*
- **A.REI.D.11** *Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ 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, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*

5. TWO-VARIABLE LINEAR SYSTEMS 3

- **SOLVING SYSTEMS OF LINEAR EQUATIONS: ELIMINATION**
  - **A2.R.1** *Given an equation, reason about the number and nature of the solutions.*
  - **A2.R.9** *Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures about trigonometric functions.*

6. SOLVING QUADRATIC EQUATIONS 1

- **QUADRATIC FORMULA**
  - **A.REI.B.4b** *Solve quadratic equations with rational number coefficients by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions.*
  - **N.CN.C.7** *Solve quadratic equations with real coefficients that have complex solutions.*
  - **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*

- **COMPLETING THE SQUARE**
  - **A.REI.B.4b** *Solve quadratic equations with rational number coefficients by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions.*
  - **N.CN.C.7** *Solve quadratic equations with real coefficients that have complex solutions.*
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*

- **PARABOLAS**
  - **F.IF.B.4** *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.*

7. SOLVING QUADRATIC EQUATIONS 2

- **SOLVING SQUARE ROOT EQUATIONS**
  - **A2.M.6** *Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in the standards.*
  - **A.REI.A.2** *Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.*
  - **A2.R.5** *Identify a correct method and justification given two or more chains of reasoning.*

- **SOLVING QUADRATIC EQUATIONS BY FACTORING**
  - **A2.M.6** *Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in the standards.*
  - **A.CED.A.1** *Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*
  - **A.REI.B.4b** *Solve quadratic equations with rational number coefficients by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions.*
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph,*

a description of a relationship, or two input-output pairs (include reading these from a table).

- **A2.R.1** *Given an equation, reason about the number and nature of the solutions.*

8. ADDITION AND SUBTRACTION OF POLYNOMIALS

- **POLYNOMIAL BASICS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*

- **ADDITION AND SUBTRACTION OF POLYNOMIALS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*

9. MULTIPLICATION AND DIVISION OF POLYNOMIALS

- **MULTIPLICATION OF POLYNOMIALS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*

- **DIVISION OF POLYNOMIALS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*
  - **A.APR.D.6** *Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.*

10. GRAPHS OF POLYNOMIAL FUNCTIONS

- **GRAPHS OF POLYNOMIAL FUNCTIONS**
  - **A2.R.10** *Express reasoning about the relationship between zeros and factors of polynomials.*
  - **F.BF.B.3** *Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, 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.*
  - **A.APR.B.3** *Identify zeros of polynomials when suitable factorizations are available and use the zeros to construct a rough graph of the function defined by the polynomial.*
  - **F.IF.B.4** *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.*
  - **F.IF.C.7.c** *Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.*

11. FACTORING

- **FACTORING SPECIAL CASES**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*

- **FACTORING CUBIC POLYNOMIALS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*

12. FACTORING HIGHER-ORDER POLYNOMIALS

- **FACTORING HIGHER-ORDER POLYNOMIALS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*
  - **A.APR.B.3** *Identify zeros of polynomials when suitable factorizations are available and use the zeros to construct a rough graph of the function defined by the polynomial.*

- **FACTOR THEOREM AND REMAINDER THEOREM**

- **FACTOR THEOREM AND REMAINDER THEOREM**
  - **A.APR.B.2** *Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.*

13. COMPLEX NUMBERS AND QUADRATIC FUNCTIONS

- **COMPLEX NUMBERS**
  - **N.CN.A.1** *Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.*
  - **N.CN.A.2** *Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.*

- **COMPLEX NUMBERS AND QUADRATIC FUNCTIONS**
  - **N.CN.C.7** *Solve quadratic equations with real coefficients that have complex solutions.*
  - **A.REI.B.4b** *Solve quadratic equations with rational number coefficients by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions.*
  - **N.CN.A.1** *Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.*

14. POLYNOMIAL IDENTITIES

- **POLYNOMIAL IDENTITIES**
  - **A.APR.C.4** *Prove polynomial identities and use them to describe numerical relationships.*
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*
  - **A2.R.9** *Construct, autonomously, chains of reasoning that will justify or refute propositions or conjectures about trigonometric functions.*

15. POLYNOMIAL IDENTITIES AND COMPLEX NUMBERS

- **POLYNOMIAL IDENTITIES AND COMPLEX NUMBERS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*
  - **N.CN.C.7** *Solve quadratic equations with real coefficients that have complex solutions.*

16. FUNCTIONS

- **FUNCTIONS AND RELATIONS**
  - **S.ID.B.6a** *Fit a function to the data; use functions fitted to data to solve problems in the real-world context of the data. Use given functions or choose a function suggested by the real-world context.*

- **INVERSE FUNCTIONS**
  - **F.BF.B.4.a** *Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse.*

17. LINEAR RELATIONSHIPS

- **SLOPE**
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
  - **F.IF.B.6** *Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*

- **GRAPHING AND ANALYZING LINEAR FUNCTIONS**
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph,*

a description of a relationship, or two input-output pairs (include reading these from a table).

- **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
- **F.IF.B.4** *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.*

- **GRAPHING AND MANIPULATING Y = MX + B**
  - **F.BF.B.3** *Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\ f(x)$, $f(kx)$, 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.*
  - **F.IF.B.4** *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.*
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*

18. LAWS OF EXPONENTS

- **LAWS OF EXPONENTS**
  - **A2.R.11** *Express reasoning about properties of exponents.*
  - **N.RN.A.1** *Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents.*
  - **A.SSE.B.3c** *Use the properties of exponents to transform expressions for exponential functions.*

19. EXPONENTIAL RELATIONSHIPS

- **EXPONENTIAL FUNCTIONS**
  - **F.IF.C.7.e** *Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.*
  - **F.IF.B.4** *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.*
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).*

- **EXPONENTIAL GROWTH AND DECAY**
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
  - **F.IF.C.8.b** *Use the properties of exponents to interpret expressions for exponential functions.*
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).*

- **SOLVING EXPONENTIAL EQUATIONS**
  - **A.CED.A.1** *Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).*
  - **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*

20. LOGARITHMIC RELATIONSHIPS 1

- **EVALUATING LOGARITHMIC EXPRESSIONS**
  - **A.SSE.A.2** *Use the structure of expressions to identify ways to rewrite it.*

- **LOGARITHMIC FUNCTIONS**
  - **F.IF.C.7.e** *Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions,*

showing period, midline, and amplitude.

- **F.IF.B.4** *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.*

21. LOGARITHMIC RELATIONSHIPS 2

- **SOLVING LOGARITHMIC EQUATIONS**
  - **A.CED.A.1** *Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*
  - **A2.R.1** *Given an equation, reason about the number and nature of the solutions.*

22. SEQUENCES

- **SEQUENCES**
  - **F.IF.A.3** *Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n + 1) = f(n) + f(n - 1)$ for $n \geq 1$.*
  - **F.BF.A.1a** *Determine an explicit expression, a recursive process, or steps for calculation from a real-world context.*

- **ARITHMETIC AND GEOMETRIC SEQUENCES**
  - **F.BF.A.2** *Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.*
  - **F.IF.A.3** *Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n + 1) = f(n) + f(n - 1)$ for $n \geq 1$.*
  - **F.BF.A.1a** *Determine an explicit expression, a recursive process, or steps for calculation from a real-world context.*

- **SUMS OF GEOMETRIC SEQUENCES**
  - **A.SSE.B.4** *Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.*

23. MODELING WITH FUNCTIONS 1

- **ANALYZING GRAPHS OF RATIONAL FUNCTIONS**

- **ANALYZING GRAPHS OF SQUARE ROOT FUNCTIONS**
  - **F.BF.B.3** *Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, 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.*

- **ANALYZING GRAPHS OF QUADRATIC FUNCTIONS**
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
  - **F.BF.B.3** *Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, 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.*
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).*
  - **F.IF.C.9** *Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).*

24. MODELING WITH FUNCTIONS 2

- **REPRESENTATIONS OF QUADRATIC FUNCTIONS**
  - **F.LE.A.2** *Construct linear, quadratic and exponential functions, including arithmetic and geometric sequences, given a graph,*

a description of a relationship, or two input-output pairs (include reading these from a table).

- **F.IF.C.8** *Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.*
- **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*
- **A2.M.6** *Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in the standards.*
- **A.REI.B.4b** *Solve quadratic equations with rational number coefficients by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions.*
- **A.CED.A.1** *Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*

- **MODELING SITUATIONS WITH RATIONAL FUNCTIONS**
  - **F.IF.C.8** *Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.*
  - **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*

25. WORKING WITH FUNCTIONS

- **LINEAR VERSUS NONLINEAR FUNCTIONS**
  - **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
  - **F.IF.B.4** *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.*
  - **F.IF.B.6** *Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.*

- **ARITHMETIC OPERATIONS ON FUNCTIONS**
  - **F.BF.A.1.b** *Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.*
  - **A2.M.6** *Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in the standards.*

- **MULTIPLE REPRESENTATIONS OF FUNCTIONS**
  - **A2.M.4** *Interpret the solution to a real-world problem in terms of context.*
  - **F.LE.B.5** *Interpret the parameters in a linear, quadratic or exponential function in terms of a context.*
  - **F.IF.C.9** *Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).*

26. NONLINEAR EQUATIONS AND FUNCTIONS

- **SYSTEMS OF NONLINEAR EQUATIONS**
  - **A2.R.2** *Given a system of equations, reason about the number of solutions.*
  - **A.REI.C.7** *Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically.*
  - **A.REI.D.11** *Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ 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, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*

- **ABSOLUTE VALUE FUNCTIONS**

27. PARENT FUNCTIONS AND TRANSFORMATIONS

- **PARENT FUNCTIONS**
  - **F.IF.C.7.e** *Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.*

- **TRANSFORMATIONS OF PARENT FUNCTIONS**
  - **F.BF.B.3** *Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, 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.*

- **MULTIPLE TRANSFORMATIONS OF PARENT FUNCTIONS**
  - **F.BF.B.3** *Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k\,f(x)$, $f(kx)$, 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.*

28. RADIANS AND THE UNIT CIRCLE

- **RADIANS AND THE UNIT CIRCLE**
  - **F.TF.A.1** *Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.*
  - **A2.R.6** *Given a proposition, determine cases where the proposition is true or false.*
  - **A2.M.2** *Construct a mathematical model to solve a problem.*
  - **F.TF.A.2** *Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.*
  - **A2.R.1** *Given an equation, reason about the number and nature of the solutions.*
  - **A2.M.6** *Solve multi-step contextual word problems with degree of difficulty appropriate to the course, requiring application of course-level knowledge and skills articulated in the standards.*

29. TRIGONOMETRIC FUNCTIONS

- **TRIGONOMETRIC FUNCTIONS**
  - **F.IF.B.4** *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.*
  - **F.TF.B.5** *Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.*
  - **F.TF.C.8** *Prove the Pythagorean identity $\sin^2\theta + \cos^2\theta = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$ or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$ or $\tan(\theta)$ and the quadrant of the angle.*

30. TWO-VARIABLE DATA

- **SCATTERPLOTS AND MODELING**
  - **S.ID.B.6a** *Fit a function to the data; use functions fitted to data to solve problems in the real-world context of the data. Use given functions or choose a function suggested by the real-world context.*

31. 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**