CORE@TCA SIDE BY SIDE STANDARDS
4th /5th / 6th Grade
Essential Standards
Mathematics

Based on State Key Content Standards compiled by the Pulliam Group

Strand	Standard 4th Grade	Standard 5th Grade	Standard 6th Grade
Number Sense	1.1 Read and write whole numbers to the millions 1.2 Order and compare whole numbers to 9,999 and decimals to two places 1.3 Round whole numbers through the millions (up to 1,000,000) 1.4 Decide when a rounded solution is called for and explain why 1.8 Use concepts of negative numbers (number line, temperature, etc.) 1.9 Identify on a number line the relative position of a positive fraction, mixed numbers, and decimals to two decimal places 3.1 Use standard algorithms for the addition and subtraction of multi-digit numbers 3.2 Use an algorithm for multiplying multi-digit numbers by two digit numbers 3.3 Solve problems involving multiplication of multi-digit numbers by two digit 3.4 Solve problems involving division of multi-digit numbers by two digit numbers 4.0 Know how to factor small whole numbers 5.0 Know that numbers such as 2,3,5,7 and 11 do not have any factors except 1 and themselves and that such numbers are prime numbers	1.2 Interpret percents as part of a hundred, find decimal and percent equivalents for common fractions, and compute a given percent of a whole number 1.1 Determine the prime factors of all numbers through 50, and write the numbers as the product of their prime factors by using exponents to show the multiples of a factor 1.2 Identify and represent on a number line decimals, fractions, mixed numbers and positive and negative integers 2.1 Add, subtract, multiply and divide whole numbers and decimals 2.2 Demonstrate proficiency with division, including division with positive decimals and long division with multi-digit divisors 2.3 Solve simple problems, including ones arising in concrete situations, involving the addition and subtraction of fractions and mixed numbers (like and unlike denominators of 20 or less); express answers in the simplest form	1.0 Compare and order positive and negative fractions, decimals and mixed numbers; solve problems involving fractions, rations, proportions, and percentages Compare and order positive and negative fractions, decimals, and mixed numbers, and place them on a number line 1.1 Compare and order positive and negative fractions, decimals, and mixed numbers, and place them on a number line 1.2 Interpret and use ratios in different contexts (e.g., batting averages) to show the relative sizes of two quantities, using appropriate notations (***a/b. a* to *b. a:b***) 1.3 Use proportions to solve problems; use cross-multiplication to solve such problems 1.4 Calculate given percentages of quantities, and solve problems involving discounts 2.3 Solve addition, subtraction, multiplication, and division problems with positive and negative numbers 2.4 Determine least common multiple, and greatest common devisor of whole numbers
Algebra and functions	1.1 Interpret and evaluate mathematical expressions with parentheses 1.2 Use parentheses to indicate which operation to perform first 1.3 Understand that an equation such as ***y=3x+5*** is a prescription for determining a second number when a first number is given 2.1 Know that equals add to equals are equal 2.2 Know that equals multiplied by equals are equal	1.2 Use a letter to represent an unknown number; write and evaluate simple algebraic expressions in one variable by substitution 1.3 Identify and graph ordered pairs in the four quadrants of the coordinate plane 1.4 Solve problems involving linear functions with integer values; write the equation, and graph the resulting ordered pair of integers on a grid	1.1 Understand, solve, and write simple one-variable linear equations 1.2 Understand that rate is a measure of one quantity per unit value of another quantity
Measurement and Geometry	2.1 Draw the point corresponding to linear relationship on graph paper 2.2 Understand that the length of a horizontal line segment equals the difference of the ***x***-coordinates 2.3 Understand that the length of a vertical line segment equals the difference of the ***y***-coordinates	1.1 Use the formula for the area of a triangle and a parallelogram 1.2 Construct a cube and rectangular box from tow-dimensional patterns, and use these patterns to compute the surface area for the objects 1.3 Understand the concept of volume, and use the appropriate units in common measuring systems to compare the volume of rectangular solids 2.1 Measure, identify, and draw angles, perpendicular and parallel lines, rectangles, and triangles by using appropriate tools 2.2 Know that the sum of the angles of any triangle is 180° and the sum of the angles of and	1.1 Understand the concept of a constant such as Π 2.3 Use the properties of complementary and supplementary angles and the sum of the angles of a triangle to solve problems involving an unknown angle

		quadrilateral is 360° and use this information to solve problems	
Statistics, Data Analysis, and Probability	1.0 Organize, represent, and interpret data	1.4 Identify ordered pairs of data from a graph, and interpret the meaning of the data in terms of the situation depicted by the graph 1.5 Know how to write ordered pairs correctly, for example, (***x,y***)	*1.1 Compute the mean, median, and mode of date sets (1)* 2.2 Identify different ways of selecting a sample and which method is preferred 2.3 Analyze data displays and explain how the question may have influenced the results 2.4 Identify data that represent sampling errors, and explain why they might be biased *2.5 Evaluate the validity of a statistical claim (1)* *3.1 Represent all possible outcomes for compound events in an organized way (1)* *3.3 Represent probabilities as ratios, proportions, decimals, and percents (2)* *3.4 Understand the difference between dependent and independent events (1)*
Mathematical Reasoning	1.0 Make decisions about how to approach problems 2.0 Use strategies, skill, and concepts in finding solutions	1.0 Make decisions about how to solve problems 2.0 Use strategies, skills, and concepts in finding solutions	1.0 Make decisions about how to solve problems 2.0 Use strategies, skills, and concepts in finding solutions

Italicized items represent standards on the High School Exit Exam and the number of items represented on the exam.