

Math Charts for Report Cards (K-8) - 2019-2020

Mathematics (Level: <i>K</i>)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Knows and can produce written number names and numerals and the count sequence			
Counts to tell the number of objects, can count out a number of objects and can compare sets and numbers			
Understands, models and applies addition (putting together, adding to) and subtraction (taking apart, taking from)			
Uses strategies for ordering numbers of small sets, counting and producing sets of given sizes and giving the number of objects after combining or reducing			
Describes and models the physical world using geometric ideas, vocabulary and spatial reasoning with basic shapes			
Identifies, names and describes basic 2-D shapes (square, triangle, circle, rectangle, hexagon) and 3-D shapes (cube, cone, cylinder, sphere)			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

Mathematics (Level: <i>1</i>)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Recognizes addition as counting by a number and can solve problems comparing relative sizes of whole numbers to 100			
Uses models, representations and strategies to solve addition and subtraction equations (within 20) involving changes in length and the relationship between the operations.			
Understands place value by recognizing numbers between 10 and 100 in terms of 10s and 1s			
Develops and uses strategies to add within 100 and subtract multiples of 10			
Determines how figures are alike or different, including recognizing complex figures from different perspectives			
Can compose or decompose 2-dimensional and 3-dimensional figures to investigate part/whole relationships			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

Mathematics (Level: <i>2</i>)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Demonstrates facility with models for addition and subtraction of whole numbers using place value and knowledge of operations within 100			
Selects and applies appropriate strategies to mentally calculate or estimate sums and differences for numbers with only tens or hundreds			
Understands and recognizes 3-digit numbers written in base-ten and expanded notation			
Displays understanding of base-ten system to include counting by and comparing 5s, 10s and 100s			
Describes and analyzes 2-dimensional shapes by examining the length and number of their sides and angles			
Builds, draws and analyzes 2- and 3-dimensional shapes alone and in combination with other shapes			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

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Mathematics (Level: 3)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Investigates and understands the inverse relationship of multiplication and division problems involving single-digit factors.			
Compares fractions by using visual models and equal numerators or denominators, recognizing that the size of the denominator determines the number and size of the pieces			
Uses fractions (including unit fractions) to represent numbers less than, greater than and equal to one			
Measures the area of a 2-dimensional shape by finding the number of unit squares in the shape, especially by relating rectangular arrays to multiplication			
Relates area to fractions by expressing the area of part of a shape as a fraction of the whole shape			
Can describe, analyze, compare, classify and define 2-dimensional shapes according to length and number of sides and angles			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

Mathematics (Level: 4)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Applies understanding of multiplication and division models, place value and the distributive property to solve problems involving multi-digit whole numbers			
Develops and uses efficient, generalizable methods (including estimates and mental calculations) to find products and quotients, including interpreting remainders			
Generalizes understanding of place value to 1,000,000 and understands the relative sizes of numbers in each place			
Extends understanding of combining unit fractions to multiply a fraction by a whole number			
Develops methods for recognizing and generating equivalent fractions			
Demonstrates the ability to describe, analyze, compare, classify and define 2-dimensional shapes to solve problems involving symmetry			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

Mathematics (Level: 5)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Demonstrates fluency with multi-digit addition, subtraction, multiplication and division and understands why division procedures work			
Applies understanding of the relationship between fractions and decimals to add, subtract, multiply and divide decimals to hundredths accurately and by estimation			
Combines the meanings of fraction with multiplication and division to understand how both operations act on fractions			
Demonstrates fluency with addition and subtraction of fractions with like and unlike denominators, including using estimates			
Recognizes volume as an attribute of 3-dimensional space and can find the volume of a prism by decomposing it into layers of arrays of cubes			
Selects appropriate cubic units and measures necessary attributes to determine volume			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

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Mathematics (Level: 6)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Utilizes strategies to solve real-world problems involving addition, subtraction, multiplication, and division of fractions with unlike denominators (rational numbers)			
Demonstrates a developing understanding of area formulas (triangles and parallelograms)			
Employs strategies to solve real world problems using rate and ratio concepts			
Compares, orders, and solves real-world problems involving negative numbers			
Represents and solves real-world problems through writing, interpreting, and using equations, inequalities, and quantitative relationships between dependent and independent variables			
Represents and describes statistical variability (measures of center)			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

Mathematics (Level: 7)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Investigates relationships between two-dimensional figures using scale drawings and informal geometric constructions			
Employs strategies to solve real-world problems through the application of proportional relationships, including percent and unit rates			
Utilizes strategies to solve real-world problems through the use of operations with rational numbers, working with algebraic expressions, and developing linear equations			
Applies strategies to solve real-world problems involving area of circles and surface area/volume of polygonal solids			
Investigates chance processes and develops, uses, and evaluates probability models in terms of countable outcomes and area			
Draws inferences about populations based on samples			
Investigates relationships between two-dimensional figures using scale drawings and informal geometric constructions			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			

Mathematics (Level: 8)	<i>T1</i>	<i>T2</i>	<i>T3</i>
Formulates equations, including modeling an association in bivariate data with a linear equation and proportionality			
Solves linear equations and systems of linear equations			
Defines, evaluates, and compares functions in order to model relationships between quantities and describe quantitative relationships			
Applies the Pythagorean Theorem and uses/understands of irrational numbers			
Analyzes two and three dimensional space and figures using distance, angle, and similarity, including geometric transformations			
Uses physical models, transparencies, and/or geometry software to demonstrate congruence of figures and solves real-world problems, including volume of cylinders, cones and spheres			
Formulates equations, including modeling an association in bivariate data with a linear equation and proportionality			
Can make sense of problems, can reason abstractly, can construct & critique arguments, can use models and tools appropriately, can communicate precisely, can recognize patterns and can make generalizations			