3-8 Math Standard Trends
Average Percentage Points Earned
Please note: only standards with at least 2 years of data are present

Math 3

Cluster	2015	2016	2017
Reason with shapes and their attributes.	93%	95%	81%
Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	76%	85%	83%
Represent and interpret data.	76%	88%	70%
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	70%	77%	77%
Use place value understanding and properties of operations to perform multi-digit arithmetic.	73%	88%	73%
Develop understanding of fractions as numbers.	76%	73%	77%
Represent and solve problems involving multiplication and division.	80%	77%	83%
Solve problems involving the four operations, and identify and explain patterns in arithmetic.	72%	71%	60%
Understand properties of multiplication and the relationship between multiplication and division.	81%	70%	71%

Math 4

Cluster	2015	2016	2017
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	70%	72%	76%
Reason with shapes and their attributes.	87%	-	80%
Geometric measurement: recognize perimeter.	70%	71%	89%
Geometric measurement: understand concepts of angle and measure angles.	78%	77%	77%
Represent and interpret data.	80%	65%	83%
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	77%	70%	51%
Generalize place value understanding for multi-digit whole numbers.	81%	75%	89%
Use place value understanding and properties of operations to perform multi-digit arithmetic.	78%	78%	82%
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	68%	68%	72%
Extend understanding of fraction equivalence and ordering.	80%	75%	67%
Gain familiarity with factors and multiples.	74%	80%	92%
Generate and analyze patterns.	62%	58%	75%
Use the four operations with whole numbers to solve problems.	79%	74%	79%

Math 5

Cluster	2015	2016	2017
Classify two-dimensional figures into categories based on their properties.	74%	71%	69%
Convert like measurement units within a given measurement system.	66%	59%	53%
Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.	85%	70%	84%
Represent and interpret data.	46%	65%	63%
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	88%	72%	74%
Perform operations with multi-digit whole numbers and with decimals to hundredths.	79%	78%	65%
Understand the place value system.	76%	71%	69%
Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	59%	61%	67%
Understand decimal notation for fractions, and compare decimal fractions.	82%	85%	90%
Use equivalent fractions as a strategy to add and subtract fractions.	69%	73%	70%
Write and interpret numerical expressions.	92%	82%	86%

Math 6

Cluster	2015	2016	2017
Apply and extend previous understandings of arithmetic to algebraic expressions.	56%	48%	72%
Reason about and solve one-variable equations and inequalities.	72%	69%	59%
Represent and analyze quantitative relationships between dependent and independent variables.	48%	59%	81%
Graph points on the coordinate plane to solve real-world and mathematical problems.	79%	86%	70%
Solve real-world and mathematical problems involving area, surface area, and volume.	65%	49%	55%
Analyze patterns and relationships.	57%	66%	-
Understand ratio concepts and use ratio reasoning to solve problems.	66%	58%	62%
Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	60%	47%	49%
Apply and extend previous understandings of numbers to the system of rational numbers.	72%	61%	73%
Multiply and divide multi-digit numbers and find common factors and multiples.	79%	56%	78%

Math 7

Cluster	2015	2016	2017
Solve real-life and mathematical problems using numerical and algebraic expressions and equations.	68%	69%	61%
Use properties of operations to generate equivalent expressions.	54%	63%	54%
Draw, construct and describe geometrical figures and describe the relationships between them.	66%	79%	62%
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	68%	63%	66%
Analyze proportional relationships and use them to solve real-world and mathematical problems.	62%	53%	53%
Draw informal comparative inferences about two populations.	79%	68%	63%
Investigate chance processes and develop, use, and evaluate probability models.	71%	69%	64%
Use random sampling to draw inferences about a population.	66%	79%	87%
Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.	68%	63%	62%

Math 8

Cluster	2015	2016	2017
Analyze and solve linear equations and pairs of simultaneous linear equations.	68%	66%	56%
Understand the connections between proportional relationships, lines, and linear equations.	65%	55%	52%
Work with radicals and integer exponents.	63%	70%	47%
Define, evaluate, and compare functions.	53%	55%	59%
Use functions to model relationships between quantities.	66%	57%	68%
Draw, construct and describe geometrical figures and describe the relationships between them.	79%	-	51%
Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.	47%	-	66%
Solve real-world and mathematical problems involving volume of cylinders, cones and spheres.	68%	73%	51%
Understand congruence and similarity using physical models, transparencies, or geometry software.	64%	65%	58%
Investigate patterns of association in bivariate data.	69%	73%	74%