

Domain	Grade 2	Grade 3	Grade 4
Counting and Cardinality			
Operations and Algebraic Thinking	<ul style="list-style-type: none"> Represent and solve problems involving addition and subtraction. Add and subtract within 20. Work with equal groups of objects to gain foundations for multiplication. 	<ul style="list-style-type: none"> Represent and solve problems involving multiplication and division. Understand properties of multiplication and the relationship between multiplication and division. Multiply and divide within 100. Solve problems involving the four operations, and identify and explain patterns in arithmetic. 	<ul style="list-style-type: none"> Use the four operations with whole numbers to solve problems. Gain familiarity with factors and multiples. Generate and analyze patterns.
Number and Operations in Base Ten	<ul style="list-style-type: none"> Understand place value. Use place value understanding and properties of operations to add and subtract. 	<ul style="list-style-type: none"> Use place value understanding and properties of operations to perform multi-digit arithmetic. 	<ul style="list-style-type: none"> Generalize place value understanding for multi-digit whole numbers. Use place value understanding and properties of operations to perform multi-digit arithmetic.
Number and Operations—Fractions		<ul style="list-style-type: none"> Develop understanding of fractions as numbers. 	<ul style="list-style-type: none"> Extend understanding of fraction equivalence and ordering. Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Understand decimal notation for fractions, and compare decimal fractions.
Measurement and Data	<ul style="list-style-type: none"> Measure and estimate lengths in standard units. Relate addition and subtraction to length. Work with time and money. Represent and interpret data. 	<ul style="list-style-type: none"> Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. Represent and interpret data. Geometric measurement: understand concepts of area and relate area to multiplication and to addition. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. 	<ul style="list-style-type: none"> Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Represent and interpret data. Geometric measurement: understand concepts of angle and measure angles.
Ratios and Proportional Relationships			
The Number System			
Expressions and Equations			
Functions			

PA Core Mathematics Standards – Cluster Heading Matrix

Trifold – Grades 2-3-4

Geometry	<ul style="list-style-type: none"> Reason with shapes and their attributes. 	<ul style="list-style-type: none"> Reason with shapes and their attributes. 	<ul style="list-style-type: none"> Draw and identify lines and angles, and classify shapes by properties of their lines and angles.
Statistics and Probability			