

PA Core Mathematics Standards – Cluster Heading Matrix

Trifold – Grades 3-4-5

Domain	Grade 3 Cluster Heading	Grade 4 Cluster Heading	Grade 5 Cluster Heading
Counting and Cardinality			
Operations and Algebraic Thinking	<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. 	<ul style="list-style-type: none"> Write and interpret numerical expressions. Analyze patterns and relationships.
Number and Operations in Base Ten	<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. 	<ul style="list-style-type: none"> Understand the place value system. Perform operations with multi-digit whole numbers and with decimals to hundredths.
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. 	<ul style="list-style-type: none"> Use equivalent fractions as a strategy to add and subtract fractions. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
Measurement and 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. 	<ul style="list-style-type: none"> Convert like measurement units within a given measurement system. Represent and interpret data. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
Ratios and Proportional Relationships			
The Number System			
Expressions and Equations			
Functions			

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Geometry	<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. 	<ul style="list-style-type: none"> Graph points on the coordinate plane to solve real world and mathematical problems. Classify two-dimensional figures into categories based on their properties.
Statistics and Probability			