

Mathematics Blueprint

The purpose of this blueprint is to outline the percentage of items that will be assessed within the domains of the *Kentucky Academic Standards (KAS) for Mathematics*. The *KAS for Mathematics* emphasizes the balance between the Standards for Mathematical Practices and the Standards for Mathematical Content. The blueprint is designed to create an assessment that measures students’ abilities to make sense and persevere when solving problems (MP.1), use quantities appropriately (MP.2), communicate and critique mathematical thinking (MP.3), model with mathematics (MP.4), strategically use tools (MP.5), attend to precision (MP.6), and to look for and apply structure (MP.7) and patterns (MP.8) to solve problems within grade-level content. The Standards for Mathematical Content are a balanced combination of conceptual understanding, procedural skills/fluency and application. Additionally, for K-8, the percent allocations for content items are based on grade-level domains (as described in the Overview for each grade in the KAS for Mathematics). For high school, the percent allocations for content items are based on conceptual categories (as described on the [High School Mathematics Matrix Standards by Course](#)).

For more in-depth information on the *KAS for Mathematics*, please visit https://kystandards.org/content_area/math/.

Grades 3, 4, and 5

Domain	Target %		
	Grade 3	Grade 4	Grade 5
Operations and Algebraic Thinking	30-35	15-20	15-20
Number and Operations in Base Ten	15-20	25-30	25-30
Number and Operations -- Fractions	20-25	25-30	25-30
Measurement and Data	15-20	10-15	10-15
Geometry	10-15	10-15	10-15
Assessments at Grades 3, 4 and 5 will consist of 60-70% items that are Non-Calculator.			
All test items will be aligned to the Standards for Mathematical Practice.			

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Grades 6 and 7

Domain	Target %	
	Grade 6	Grade 7
Ratios and Proportional Relationships	10-15	20-25
The Number System	30-35	15-20
Expressions and Equations	25-30	20-25
Geometry	15-20	20-25
Statistics and Probability	15-20	20-25
Assessments at Grades 6 and 7 will consist of 30-35% items that are Non-Calculator.		
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Grade 8

Domain	Target %
	Grade 8
Expressions & Equations	25-30
Functions	25-30
The Number System	10-15
Geometry	25-30
Statistics and Probability	10-15
The assessment at Grade 8 will consist of 20-25% items that are Non-Calculator.	
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Grade 10

Conceptual Category	Target %
	Grade 10
Algebra	22-27
Functions	22-27
Number and Quantity	10-15
Geometry	25-30
Statistics and Probability	10-15
The assessment at Grade 10 will consist of 20-25% items that are Non-Calculator.	
All test items will be aligned to the Standards for Mathematical Practice.	