

# Utah SAGE Elementary Mathematics Blueprints

Grade 3		
45 Operational Items		
Domain	Min.	Max.
Operations and Algebraic Thinking (OA)	29%	38%
Number and Operations in Base Ten (NBT)	18%	22%
Number and Operations- Fractions (NF)	27%	31%
Measurement and Data and Geometry (MD/G)	18%	22%
DOK 1	18%	31%
DOK 2	38%	58%
DOK 3	9%	20%

Grade 5		
50 Operational Items		
Domain	Min.	Max.
Operations and Algebraic Thinking (OA)	16%	20%
Number and Operations in Base Ten (NBT)	30%	36%
Number and Operations- Fractions (NF)	28%	34%
Measurement and Data and Geometry (MD/G)	18%	22%
DOK 1	16%	28%
DOK 2	50%	64%
DOK 3	10%	24%

Grade 4		
50 Operational Items		
Domain	Min.	Max.
Operations and Algebraic Thinking (OA)	18%	22%
Number and Operations in Base Ten (NBT)	28%	32%
Number and Operations- Fractions (NF)	28%	32%
Measurement and Data and Geometry (MD/G)	16%	22%
DOK 1	22%	44%
DOK 2	44%	58%
DOK 3	12%	22%

Grade 6		
50 Operational Items		
Domain	Min.	Max.
Ratios and Proportional Relationships (RP)	28%	32%
The Number System (NS)	18%	22%
Expressions and Equations (EE)	28%	34%
Geometry/Statistics and Probability (G/SP)	16%	20%
DOK 1	18%	32%
DOK 2	46%	62%
DOK 3	8%	20%

**Note:** The percentages shown represent target aggregate values; individual student experiences will vary based on the adaptive algorithm.

**Disclosure:** Depth of Knowledge (DOK) and Elements of Rigor are essential components of the Utah Mathematics Core Standards. As such, DOK and Elements of Rigor are integrated into the Student Assessment of Growth and Excellence (SAGE) assessment items. All students will see a variety of DOK and Elements of Rigor on the SAGE summative assessment. For more information about DOK and Elements of Rigor please see: <http://www.schools.utah.gov/assessment/Criterion-Referenced-Tests/Math.aspx>



## SECONDARY MATH 2014-2015 Adaptive Testing Item Selection Criteria



Mathematics Grade 7		
Domains	min	max
<i>Ratio and Proportions</i>	22%	26%
<i>Expressions and Equations</i>	16%	20%
<i>The Number System</i>	18%	22%
<i>Geometry</i>	18%	22%
<i>Statistics and Probability</i>	18%	22%
DOK 1	12%	24%
DOK 2	48%	60%
DOK 3	20%	26%

Mathematics Grade 8		
Domains	min	max
<i>Functions</i>	20%	24%
<i>Expressions and Equations</i>	20%	24%
<i>Geometry / The Number System</i>	34%	40%
<i>Statistics and Probability</i>	16%	20%
DOK 1	20%	30%
DOK 2	40%	50%
DOK 3	20%	26%

Mathematics Secondary I		
Conceptual Categories	min	max
<i>Algebra</i>	30%	35%
<i>Number and Quantity / Functions / Statistics and Probability</i>	33%	38%
<i>Geometry</i>	30%	35%
DOK 1	16%	24%
DOK 2	44%	56%
DOK 3	24%	28%

Mathematics Secondary II		
Conceptual Categories	min	max
<i>Number and Quantity/ Algebra</i>	25%	30%
<i>Functions</i>	25%	30%
<i>Geometry</i>	23%	25%
<i>Statistics and Probability</i>	23%	25%
DOK 1	16%	24%
DOK 2	44%	56%
DOK 3	20%	26%

Mathematics Secondary III		
Conceptual Categories	min	max
<i>Number and Quantity / Algebra</i>	30%	35%
<i>Functions</i>	30%	35%
<i>Trigonometric Functions / Geometry</i>	23%	28%
<i>Statistics and Probability***</i>	8%	13%
DOK 1	10%	20%
DOK 2	40%	50%
DOK 3	30%	36%

Purpose: The purpose of test blueprints is to make sure that the intended breadth and depth of the curriculum is represented on the CRTS.

The percentages shown represent target aggregate values; individual student experiences will vary based on the adaptive algorithm.

DOK Blueprint Disclosure: Depth of Knowledge (DOK) is an essential component of the Secondary Math instruction. As such, DOK is integrated in all mathematics items throughout the Student Assessment of Growth and Excellence (SAGE) and their respective blueprints. All **students** will see a variety of DOK and item difficulty on the summative SAGE. For more information about DOK please see: [http://static.pdesas.org/content/documents/M1-Slide\\_22\\_DOK\\_Hess\\_Cognitive\\_Rigor.pdf](http://static.pdesas.org/content/documents/M1-Slide_22_DOK_Hess_Cognitive_Rigor.pdf)

\*\*\*NOTE: Not a reporting category, but still administer items from this Domain