

# Mathematics Blueprint

## WVGSA Grade 8



WVGSA Blueprint - Grade 8			
Domain		Number of Items	
Cluster		Min	Max
<b>Calculator Total</b>			
<b>EE &amp; NS</b>	<b>Expressions and Equations &amp; Number System</b>	<b>11</b>	<b>13</b>
	Know that there are numbers that are not rational and approximate them by rational numbers.	0	2
	Work with radicals and integer exponents.	0	4
	Understand the connections between proportional relationships, lines, and linear equations.	0	3
	Analyze and solve linear equations, pairs of simultaneous linear equations, and linear inequalities in one variable.	2	6
<b>F</b>	<b>Functions</b>	<b>8</b>	<b>10</b>
	Define, evaluate, and compare functions.	2	6
	Use functions to model relationships between quantities.	2	6
<b>G &amp; SP</b>	<b>Geometry &amp; Statistics and Probability</b>	<b>13</b>	<b>15</b>
	Understand congruence and similarity using physical models, transparencies, or geometry software.	1	6
	Understand and apply the Pythagorean Theorem.	0	4
	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	0	2
	Investigate patterns of association in bivariate data.	1	6
<b>DOK Ranges</b>		<b>Min</b>	<b>Max</b>
DOK 1		5	9
DOK 2		17	22
DOK 3		5	9
<b>Mathematical Habits of Mind Sub-Score</b>		<b>Min</b>	<b>Max</b>
MHM: Modeling and Problem Solving		9	12
MHM: Use Mathematical Reasoning		8	11