2018-19 NC Check-In 2
Grade 7 Mathematics
State Item Statistics

		Content Standard	Item #	Depth of Knowledge	Percent Correct by Item
Expressions and Equations	**7.EE.1**	Apply properties of operations as strategies to: • Add, subtract, and expand linear expressions with rational coefficients. • Factor linear expression with an integer GCF.	1	Recall	53.7
			10^	Recall	50.1
			16^	Recall	64.1
			22^	Recall	31.0
			24^	Recall	42.6
The Number System	**7.NS.3**	Solve real-world and mathematical problems involving numerical expressions with rational numbers using the four operations.	2	Recall	41.3
			5*	Skill/Concept	42.6
			7*	Recall	49.3
			9*^	Skill/Concept	56.2
			14^	Recall	70.1

Ration and Proportions	**7.RP.2**	Recognize and represent proportional relationships between quantities.
		  a. Understand that a proportion is a relationship of equality between ratios.
		    o Represent proportional relationships using tables and graphs.
		    o Recognize whether ratios are in a proportional relationship using tables and graphs.
		    o Compare two different proportional relationships using tables, graphs, equations, and verbal descriptions.
		  b. Identify the unit rate (constant of proportionality) within two quantities in a proportional relationship using tables, graphs, equations, and verbal descriptions.
		  c. Create equations and graphs to represent proportional relationships.
		  d. Use a graphical representation of a proportional relationship in context to:
		    o Explain the meaning of any point (x, y).
		    o Explain the meaning of $(0, 0)$ and why it is included.
		    o Understand that the y-coordinate of the ordered pair $(1, r)$ corresponds to the unit rate and explain its meaning.
			3	Skill/Concept	81.5

			6*	Skill/Concept	41.8
			11^	Skill/Concept	62.2
			18^	Skill/Concept	65.8
			20^	Skill/Concept	57.2

Statistics and Probability	7.SP.7	Develop a probability model and use it to find probabilities of simple events.
		   a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events.
		   b. Develop a probability model (which may not be uniform) by repeatedly performing a chance process and observing frequencies in the data generated.
		   c. Compare theoretical and experimental probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
			4	Skill/Concept	83.1

			12^	Skill/Concept	57.2
			21^	Skill/Concept	38.3
			23^	Skill/Concept	73.0
			25^	Skill/Concept	59.6

	7.SP.8	Determine probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
		   a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
		   b. For an event described in everyday language, identify the outcomes in the sample space which compose the event, when the sample space is represented using organized lists, tables, and tree diagrams.
		   c. Design and use a simulation to generate frequencies for compound events.
			8*	Skill/Concept	21.6

			13^	Skill/Concept	39.7
			15^	Skill/Concept	35.4
			17^	Strategic Thinking	43.8
			19^	Skill/Concept	70.8

* Items marked with an asterisk (*) are gridded response items.

^ Students had access to a calculator when completing items marked with a ^.

Note: Results from NC Check-Ins should not be compared across interims, districts, or the state.

Each math Grade 7 NC Check-In assesses different content standards.