

## Pre-Formatted Reports: Benchmark Test Item Analysis - New Format

### Data Selections

**Institution(s):** All School Types, All Schools  
**Benchmark Administration:** 10/28/14, 2014-15 BA1 7th Math Calculator Active  
**Trend Profile:** 2014-2015  
**Subject:** Mathematics  
**Test Focus:** Mathematics  
**Test Level:** All Benchmark Test Levels  
**Test Category:** District Benchmark  
**Grade:** All Grade Levels  
**Enrollment:** Current

Number of questions: 13  
 Number of test-taking students: 1445

### Student Responses

Question - Type	Correct		Incorrect	Most Common Mistake		Point Value	Points Achieved / Possible	P-Value / Item Mean	Discrimination
	Rate	Value	Total Rate	Rate	Value				
1 - Multiple Choice	18%	A	82%	56%	D	1	264 / 1445	0.18	0.31
2 - Multiple Choice	25%	C	75%	35%	B	1	363 / 1445	0.25	0.42
3 - Multiple Choice	64%	A	36%	22%	D	1	921 / 1445	0.64	0.41
4 - Multiple Choice	12%	B	88%	70%	C	1	175 / 1445	0.12	0.24
5 - Multiple Choice	26%	A	74%	35%	C	1	374 / 1445	0.26	0.35
6 - Multiple Choice	34%	B	66%	34%	D	1	489 / 1445	0.34	0.22
7 - Multiple Choice	51%	B	49%	23%	A	1	739 / 1445	0.51	0.48
8 - Multiple Choice	13%	D	87%	50%	A	1	191 / 1445	0.13	0.41
9 - Multiple Choice	52%	B	48%	25%	A	1	758 / 1445	0.52	0.41
10 - Multiple Choice	19%	B	81%	43%	A	1	268 / 1445	0.18	0.18
11 - Multiple Choice	35%	C	65%	27%	A	1	500 / 1445	0.35	0.52
12 - Multiple Choice	8%	B	92%	73%	A	1	111 / 1445	0.08	0.02
13 - Multiple Choice	53%	D	47%	28%	A	1	764 / 1445	0.53	0.46
<b>Summary</b>	<b>31%</b>		<b>69%</b>				<b>455 / 1445</b>		

P-value represents an item's difficulty as evaluated by dividing the total number of correct responses by the total number of students tested. P-value is calculated for true/false, multiple choice, gridded or hot spot-single response items.

Item Mean is the average score for student responses to an open response question or to a multi-part question. Item Mean is calculated for inline response, matching or hot spot-multiple selections items.

Discrimination or Item Total Score Correlation is the correlation between the question score and the overall test score and indicates the extent to which success on an item corresponds to success on the test.

# NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION

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## Standards Alignment to NC Standards

Question	ID	Standard Description
1 - Multiple Choice	CCSS.Math.Content.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
2 - Multiple Choice	CCSS.Math.Content.7.NS.A.2	Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
3 - Multiple Choice	CCSS.Math.Content.7.EE.A.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."
4 - Multiple Choice	CCSS.Math.Content.7.EE.A.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."
5 - Multiple Choice	CCSS.Math.Content.7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
6 - Multiple Choice	CCSS.Math.Content.7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
7 - Multiple Choice	CCSS.Math.Content.7.EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional $\frac{1}{10}$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.
8 - Multiple Choice	CCSS.Math.Content.7.EE.A.1	Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
9 - Multiple Choice	CCSS.Math.Content.7.EE.A.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."
10 - Multiple Choice	CCSS.Math.Content.7.EE.A.2	Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."
11 - Multiple Choice	CCSS.Math.Content.7.EE.B.3	Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional $\frac{1}{10}$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.
12 - Multiple Choice	CCSS.Math.Content.7.NS.A.3	Solve real-world and mathematical problems involving the four operations with rational numbers. Computations with rational numbers extend the rules for manipulating fractions to complex fractions.
13 - Multiple Choice	CCSS.Math.Content.7.NS.A.1d	Apply properties of operations as strategies to add and subtract rational numbers.