

## 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 6th Math Calculator Inactive  
**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: 12  
 Number of test-taking students: 1518

### 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	46%	D	54%	21%	B	1	702 / 1518	0.46	0.53
2 - Multiple Choice	60%	C	40%	15%	A	1	907 / 1518	0.60	0.56
3 - Multiple Choice	32%	D	68%	42%	B	1	486 / 1518	0.32	0.33
4 - Multiple Choice	45%	B	55%	34%	C	1	680 / 1518	0.45	0.54
5 - Multiple Choice	51%	D	49%	27%	C	1	768 / 1518	0.51	0.44
6 - Multiple Choice	56%	D	44%	20%	C	1	845 / 1518	0.56	0.59
7 - Multiple Choice	77%	B	23%	8%	D	1	1175 / 1518	0.77	0.53
8 - Multiple Choice	83%	A	17%	8%	B	1	1255 / 1518	0.83	0.50
9 - Multiple Choice	85%	D	15%	7%	C	1	1290 / 1518	0.85	0.45
10 - Multiple Choice	38%	D	62%	48%	C	1	582 / 1518	0.38	0.40
11 - Gridded	47%, 1%, 0%, 1%, 0%, 0%, 0%, 0%	10, 10/1, 10.00000, 00000010, 10.0000, 10., 10.0, 0000010.	50%	7%	2/5	1	753 / 1518	0.50	0.60
12 - Gridded	5%, 15%, 28%, 0%, 0%, 0%, 0%	2.25, 2 1/4, 9/4, 009/4, 1 5/4, 2 1/4, 00002.25	51%	7%	21/4	1	740 / 1518	0.49	0.60

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Summary	56%		44%			849 / 1518		
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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.

## Standards Alignment to NC Standards

Question	ID	Standard Description
1 - Multiple Choice	CCSS.Math.Content.6.EE.A.2c	Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$ .
2 - Multiple Choice	CCSS.Math.Content.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
3 - Multiple Choice	CCSS.Math.Content.6.NS.C.5	Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
4 - Multiple Choice	CCSS.Math.Content.6.EE.A.1	Write and evaluate numerical expressions involving whole-number exponents.
5 - Multiple Choice	CCSS.Math.Content.6.EE.A.2a	Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as $5 - y$ .
6 - Multiple Choice	CCSS.Math.Content.6.NS.A.1	Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$ . (In general, $(a/b) \div (c/d) = ad/bc$ .) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi?
7 - Multiple Choice	CCSS.Math.Content.6.NS.B.2	Fluently divide multi-digit numbers using the standard algorithm.
8 - Multiple Choice	CCSS.Math.Content.6.EE.A.2c	Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$ .
9 - Multiple Choice	CCSS.Math.Content.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
10 - Multiple Choice	CCSS.Math.Content.6.NS.B.2	Fluently divide multi-digit numbers using the standard algorithm.
11 - Gridded	CCSS.Math.Content.6.NS.A.1	Interpret and compute quotients of fractions, and solve word problems

involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for  $(2/3) \div (3/4)$  and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that  $(2/3) \div (3/4) = 8/9$  because  $3/4$  of  $8/9$  is  $2/3$ . (In general,  $(a/b) \div (c/d) = ad/bc$ .) How much chocolate will each person get if 3 people share  $1/2$  lb of chocolate equally? How many  $3/4$ -cup servings are in  $2/3$  of a cup of yogurt? How wide is a rectangular strip of land with length  $3/4$  mi and area  $1/2$  square mi?

12 - Gridded	CCSS.Math.Content.6.NS.B.3	Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
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