NORTH CAROLINA DEPARTMENT OF PUBLIC INSTRUCTION

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

Data Selections

Institution(s): Middle School,All Schools
Benchmark Administration: 03/24/15, 2014-15 BA2 Math I MS Calculator Inactive
Trend Profile: 2014-2015
Subject: Mathematics
Test Focus: All Test Focuses
Test Level: 08
Test Category: District Benchmark
Grade: 08
Enrollment: Current

Number of questions: 10
Number of test-taking students: 525

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 - Gridded	32%, 3%	16/3, 5 1/3	65%	13%	5.3	1	186 / 525	0.36	0.57
2 - Gridded	39%, 0%	8, 8.0	61%	6%	2	1	204 / 525	0.39	0.60
3 - Multiple Choice	28%	B	72%	59%	A	1	145 / 525	0.28	0.47
4 - Multiple Choice	81%	C	19%	10%	B	1	427 / 525	0.81	0.40
5 - Multiple Choice	54%	A	46%	26%	D	1	283 / 525	0.54	0.51
6 - Multiple Choice	59%	B	41%	14%	C	1	310 / 525	0.59	0.55
7 - Multiple Choice	90%	B	10%	5%	C	1	470 / 525	0.89	0.28
8 - Multiple Choice	49%	D	51%	42%	A	1	255 / 525	0.48	0.31
9 - Multiple Choice	73%	B	27%	20%	D	1	385 / 525	0.73	0.44
10 - Multiple Choice	70%	A	30%	11%	B	1	368 / 525	0.70	0.43
Summary	**58%**		**42%**				**303 / 525**		

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 Common Core State Standards

Question	ID	Standard Description
1 - Gridded	**CCSS.Math.Content.HSA-**	Solve linear equations and inequalities in one variable, including

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	REI.B.3	equations with coefficients represented by letters.
2 - Gridded	**CCSS.Math.Content.HSA-REI.C.7**	Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.
3 - Multiple Choice	**CCSS.Math.Content.8.NS.A.1**	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
4 - Multiple Choice	**CCSS.Math.Content.HSF-IF.B.6**	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.
5 - Multiple Choice	**CCSS.Math.Content.HSA-SSE.A.2**	Use the structure of an expression to identify ways to rewrite it. For example, see (x to the 4th power) – (y to the 4th power) as $(x^2)^2 – (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 – y^2)(x^2 + y^2)$.
6 - Multiple Choice	**CCSS.Math.Content.HSA-REI.B.3**	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
7 - Multiple Choice	**CCSS.Math.Content.HSF-LE.A.2**	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).
8 - Multiple Choice	**CCSS.Math.Content.HSA-REI.A.1**	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
9 - Multiple Choice	**CCSS.Math.Content.HSA-CED.A.1**	Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.
10 - Multiple Choice	**CCSS.Math.Content.HSA-REI.A.1**	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.