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 Math I MS 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: 16
Number of test-taking students: 451

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	74%, 2%, 0%	45, 000045, 45.0	24%	1%	38	1	344 / 451	0.76	0.42
2 - Gridded	27%, 0%	29, 29.000	73%	14%	12	1	124 / 451	0.27	0.35
3 - Multiple Choice	77%	A	23%	12%	B	1	349 / 451	0.77	0.37
4 - Multiple Choice	39%	D	61%	29%	B	1	178 / 451	0.39	0.44
5 - Multiple Choice	88%	C	12%	6%	A	1	395 / 451	0.88	0.39
6 - Multiple Choice	60%	A	40%	37%	D	1	269 / 451	0.60	0.40
7 - Multiple Choice	69%	C	31%	22%	A	1	312 / 451	0.69	0.51
8 - Multiple Choice	58%	C	42%	16%	B	1	261 / 451	0.58	0.47
9 - Multiple Choice	38%	C	62%	43%	B	1	171 / 451	0.38	0.46
10 - Multiple Choice	60%	D	40%	14%	A	1	272 / 451	0.60	0.50
11 - Multiple Choice	40%	C	60%	24%	B	1	180 / 451	0.40	0.36
12 - Multiple Choice	19%	A	81%	49%	B	1	85 / 451	0.19	0.12
13 - Multiple Choice	37%	D	63%	24%	C	1	169 / 451	0.37	0.48
14 - Multiple Choice	46%	D	54%	42%	B	1	209 / 451	0.46	0.38
15 - Multiple Choice	80%	A	20%	14%	B	1	363 / 451	0.80	0.24
16 - Multiple Choice	41%	C	59%	46%	B	1	185 / 451	0.41	0.33
Summary	54%		46%				**242 / 451**		

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.

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Published by: n/a on 7/31/2007 to Iredell-Statesville Schools Report Bank

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 - Gridded	**CCSS.Math.Content.HSA-REI.B.3**	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
2 - Gridded	**CCSS.Math.Content.HSS-ID.A.3**	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
3 - Multiple Choice	**CCSS.Math.Content.8.F.B.4**	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
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.HSF-BF.A.2**	Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.
6 - Multiple Choice	**CCSS.Math.Content.8.F.B.4**	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
7 - Multiple Choice	**CCSS.Math.Content.8.G.B.7**	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8 - Multiple Choice	**CCSS.Math.Content.HSA-REI.B.3**	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
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.B.3**	Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
11 - Multiple Choice	**CCSS.Math.Content.HSF-IF.B.4**	For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.
12 - Multiple Choice	**CCSS.Math.Content.HSA-SSE.A.1a**	Interpret parts of an expression, such as terms, factors, and coefficients.
13 - Multiple Choice	**CCSS.Math.Content.8.EE.C.7b**	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
14 - Multiple Choice	**CCSS.Math.Content.HSA-CED.A.2**	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
15 - Multiple Choice	**CCSS.Math.Content.HSS-ID.B.5**	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including

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		joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
16 - Multiple Choice	**CCSS.Math.Content.HSS-ID.B.5**	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.

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