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 8th Math 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: 12
Number of test-taking students: 1128

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	70%	A	30%	13%	C	1	791 / 1128	0.70	0.50
2 - Multiple Choice	86%	B	14%	8%	A	1	967 / 1128	0.85	0.37
3 - Multiple Choice	36%	C	64%	31%	B	1	402 / 1128	0.35	0.39
4 - Multiple Choice	44%	B	56%	40%	D	1	500 / 1128	0.44	0.55
5 - Multiple Choice	44%	A	56%	27%	C	1	493 / 1128	0.43	0.41
6 - Multiple Choice	24%	A	76%	28%	C	1	275 / 1128	0.25	0.05
7 - Multiple Choice	59%	C	41%	27%	D	1	660 / 1128	0.58	0.38
8 - Multiple Choice	65%	C	35%	14%	B	1	733 / 1128	0.65	0.47
11 - Multiple Choice	22%	C	78%	36%	D	1	243 / 1128	0.21	0.34
12 - Multiple Choice	34%	C	66%	30%	D	1	381 / 1128	0.34	0.39
9 - Gridded	36%, 3%, 0%, 0%, 0%	2, 0002, 02, 2.00, 02.0	60%	7%	3	1	450 / 1128	0.40	0.60
10 - Gridded	14%, 1%, 0%, 0%, 0%	9, 0009, 9.00, 9., 09	85%	14%	32	1	174 / 1128	0.15	0.52
Summary	45%		55%				506 / 1128		

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 - 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.
2 - 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.
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.8.NS.A.2**	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., pi^2). For example, by truncating the decimal expansion of the square root of 2, show that the square root of 2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.
5 - Multiple Choice	**CCSS.Math.Content.8.F.A.3**	Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.
6 - Multiple Choice	**CCSS.Math.Content.8.EE.A.2**	Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that the square root of 2 is irrational.
7 - 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.
8 - Multiple Choice	**CCSS.Math.Content.8.EE.C.8c**	Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.
11 - Multiple Choice	**CCSS.Math.Content.8.SP.A.1**	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
12 - Multiple Choice	**CCSS.Math.Content.8.SP.A.1**	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
9 - Gridded	**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.
10 - Gridded	**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.