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

Data Selections

Institution(s): All School Types,All Schools
Benchmark Administration: 01/29/15, 2014-15 BA2 Yearlong HS Math I Calculator Active
Trend Profile: 2014-2015
Subject: Mathematics
Test Focus: All Test Focuses
Test Level: All Benchmark Test Levels
Test Category: District Benchmark
Grade: All Grade Levels
Enrollment: Current

Number of questions: 27
Number of test-taking students: 866

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	24%	A	76%	46%	D	1	206 / 866	0.24	0.21
2 - Multiple Choice	28%	B	72%	35%	C	1	242 / 866	0.28	0.14
3 - Multiple Choice	70%	C	30%	17%	B	1	604 / 866	0.70	0.43
4 - Multiple Choice	42%	C	58%	31%	B	1	368 / 866	0.42	0.42
5 - Multiple Choice	57%	A	43%	21%	C	1	497 / 866	0.57	0.40
6 - Multiple Choice	21%	C	79%	54%	A	1	181 / 866	0.21	0.19
7 - Multiple Choice	36%	D	64%	23%	B	1	315 / 866	0.36	0.43
8 - Multiple Choice	44%	A	56%	19%	C	1	384 / 866	0.44	0.30
9 - Multiple Choice	25%	A	75%	31%	B	1	213 / 866	0.25	0.20
10 - Multiple Choice	26%	C	74%	33%	B	1	228 / 866	0.26	0.01
11 - Multiple Choice	56%	C	44%	21%	B	1	481 / 866	0.56	0.46
12 - Multiple Choice	20%	D	80%	45%	C	1	173 / 866	0.20	0.20
13 - Multiple Choice	50%	A	50%	18%	B	1	429 / 866	0.50	0.34
14 - Multiple Choice	18%	B	82%	39%	A	1	153 / 866	0.18	-0.05
15 - Multiple Choice	24%	C	76%	56%	B	1	208 / 866	0.24	0.10
16 - Multiple Choice	40%	D	60%	27%	C	1	344 / 866	0.40	0.35
17 - Multiple Choice	57%	A	43%	21%	B	1	494 / 866	0.57	0.50
18 - Multiple Choice	15%	D	85%	31%	B	1	129 / 866	0.15	0.21
19 - Multiple Choice	28%	C	72%	33%	A	1	239 / 866	0.28	0.28
20 - Multiple Choice	63%	B	37%	23%	A	1	546 / 866	0.63	0.47

21 - Multiple Choice	34%	C	66%	36%	A	1	297 / 866	0.34	0.21
22 - Multiple Choice	31%	C	69%	42%	B	1	265 / 866	0.31	0.16
23 - Multiple Choice	56%	B	44%	18%	A	1	481 / 866	0.56	0.38
24 - Multiple Choice	54%	C	46%	27%	A	1	468 / 866	0.54	0.42
25 - Multiple Choice	24%	A	76%	31%	B	1	208 / 866	0.24	0.16
26 - Multiple Choice	30%	D	70%	35%	A	1	259 / 866	0.30	0.35
27 - Multiple Choice	24%	C	76%	37%	A	1	210 / 866	0.24	0.02
Summary	37%		63%				**319 / 866**		

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.HSF-IF.A.1**	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then f(x) denotes the output of f corresponding to the input x. The graph of f is the graph of the equation y = f(x).
2 - Multiple Choice	**CCSS.Math.Content.HSF-IF.A.1**	Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then f(x) denotes the output of f corresponding to the input x. The graph of f is the graph of the equation y = f(x).
3 - 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.
4 - Multiple Choice	**CCSS.Math.Content.HSF-IF.A.2**	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
5 - 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.
6 - 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).
7 - Multiple Choice	**CCSS.Math.Content.HSA-APR.A.1**	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.
8 - Multiple Choice	**CCSS.Math.Content.HSA-CED.A.4**	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R.
9 - Multiple Choice	**CCSS.Math.Content.HSA-CED.A.4**	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V =

		IR to highlight resistance R.
10 - 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.
11 - 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.
12 - 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.
13 - Multiple Choice	**CCSS.Math.Content.HSF-IF.C.7**	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
14 - Multiple Choice	**CCSS.Math.Content.HSF-BF.A.1**	Write a function that describes a relationship between two quantities.
15 - Multiple Choice	**CCSS.Math.Content.HSF-BF.A.1**	Write a function that describes a relationship between two quantities.
16 - Multiple Choice	**CCSS.Math.Content.HSF-LE.B.5**	Interpret the parameters in a linear or exponential function in terms of a context.
17 - 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.
18 - Multiple Choice	**CCSS.Math.Content.HSA-REI.C.6**	Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
19 - 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.
20 - Multiple Choice	**CCSS.Math.Content.HSS-IC.A.1**	Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
21 - Multiple Choice	**CCSS.Math.Content.HSF-IF.A.3**	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by f(0) = f(1) = 1, f(n+1) = f(n) + f(n-1) for n greater than or equal to 1.
22 - Multiple Choice	**CCSS.Math.Content.HSS-ID.C.7**	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
23 - Multiple Choice	**CCSS.Math.Content.HSS-ID.C.7**	Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
24 - Multiple Choice	**CCSS.Math.Content.HSS-ID.C.8**	Compute (using technology) and interpret the correlation coefficient of a linear fit.
25 - Multiple Choice	**CCSS.Math.Content.HSA-CED.A.3**	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
26 - 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.
27 - Multiple Choice	**CCSS.Math.Content.HSG-GPE.B.5**	Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).