

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

Data Selections

Institution(s): All School Types, All Schools
Benchmark Administration: 10/27/14, 2014-15 Mid-Semester Math II 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: 10
 Number of test-taking students: 616

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	13%	A	87%	44%	C	1	83 / 616	0.13	0.28
2 - Multiple Choice	33%	A	67%	36%	C	1	201 / 616	0.33	0.40
3 - Multiple Choice	44%	A	56%	23%	D	1	273 / 616	0.44	0.42
4 - Multiple Choice	23%	B	77%	39%	C	1	141 / 616	0.23	0.36
5 - Multiple Choice	69%	C	31%	15%	B	1	425 / 616	0.69	0.51
6 - Multiple Choice	16%	D	84%	39%	A	1	98 / 616	0.16	0.27
7 - Multiple Choice	66%	C	34%	13%	B	1	404 / 616	0.65	0.51
8 - Multiple Choice	40%	D	60%	42%	B	1	246 / 616	0.40	0.34
9 - Multiple Choice	25%	A	75%	40%	B	1	156 / 616	0.25	0.34
10 - Multiple Choice	38%	D	62%	23%	B	1	233 / 616	0.38	0.46
Summary	37%		63%				226 / 616		

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.HSN-RN.A	Extend the properties of exponents to rational exponents.
2 - Multiple Choice	CCSS.Math.Content.HSA-	Rearrange formulas to highlight a quantity of interest, using the same

	CED.A.4	reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R .
3 - Multiple Choice	CCSS.Math.Content.HSG-GPE.A.1	Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
4 - Multiple Choice	CCSS.Math.Content.HSN-RN.A.2	Rewrite expressions involving radicals and rational exponents using the properties of exponents.
5 - 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.
6 - Multiple Choice	CCSS.Math.Content.HSA-SSE.B.3c	Use the properties of exponents to transform expressions for exponential functions. For example the expression 1.15 to the t power can be rewritten as $((1.15$ to the $1/12$ power) to the $12t$ power) is approximately equal to $(1.012$ to the $12t$ power) to reveal the approximate equivalent monthly interest rate if the annual rate is 15% .
7 - Multiple Choice	CCSS.Math.Content.HSG-CO.A.2	Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).
8 - Multiple Choice	CCSS.Math.Content.HSG-CO.D.13	Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.
9 - Multiple Choice	CCSS.Math.Content.HSG-GMD.B.4	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
10 - Multiple Choice	CCSS.Math.Content.HSG-GMD.B.4	Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.