

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

Data Selections

Institution(s): Elementary School, All Schools
Benchmark Administration: 03/24/15, 2014-2015 BA2 1st Math
Trend Profile: 2014-2015
Subject: Mathematics
Test Focus: All Test Focuses
Test Level: 01
Test Category: District Benchmark
Grade: 01
Enrollment: Current

Number of questions: 27
 Number of test-taking students: 1471

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	83%	A	17%	16%	B	1	1225 / 1471	0.90	0.49
2 - Multiple Choice	77%	A	23%	22%	B	1	1140 / 1471	0.81	0.54
3 - Multiple Choice	71%	A	29%	29%	B	1	1044 / 1471	0.77	0.55
4 - Multiple Choice	94%	A	6%	6%	B	1	1379 / 1471	0.95	0.44
5 - Multiple Choice	94%	A	6%	5%	B	1	1387 / 1471	0.96	0.39
6 - Multiple Choice	83%	A	17%	17%	B	1	1215 / 1471	0.85	0.56
7 - Multiple Choice	97%	A	3%	2%	B	1	1434 / 1471	0.99	0.36
8 - Multiple Choice	80%	A	20%	20%	B	1	1173 / 1471	0.87	0.54
9 - Multiple Choice	92%	A	8%	8%	B	1	1350 / 1471	0.93	0.38
10 - Multiple Choice	95%	A	5%	5%	B	1	1393 / 1471	0.96	0.47
11 - Multiple Choice	71%	A	29%	29%	B	1	1043 / 1471	0.76	0.34
12 - Multiple Choice	88%	A	12%	11%	B	1	1295 / 1471	0.91	0.39
13 - Multiple Choice	82%	A	18%	18%	B	1	1199 / 1471	0.84	0.49

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14 - Multiple Choice	91%	A	9%	9%	B	1	1342 / 1471	0.93	0.47
15 - Multiple Choice	89%	A	11%	10%	B	1	1312 / 1471	0.92	0.50
16 - Multiple Choice	88%	A	12%	12%	B	1	1295 / 1471	0.89	0.42
17 - Multiple Choice	90%	A	10%	10%	B	1	1319 / 1471	0.91	0.45
18 - Multiple Choice	86%	A	14%	13%	B	1	1271 / 1471	0.92	0.58
19 - Multiple Choice	87%	A	13%	13%	B	1	1276 / 1471	0.89	0.51
20 - Multiple Choice	71%	A	29%	28%	B	1	1049 / 1471	0.76	0.52
21 - Multiple Choice	85%	A	15%	15%	B	1	1245 / 1471	0.86	0.39
22 - Multiple Choice	89%	A	11%	11%	B	1	1302 / 1471	0.89	0.33
23 - Multiple Choice	93%	A	7%	7%	B	1	1368 / 1471	0.95	0.50
24 - Multiple Choice	86%	A	14%	14%	B	1	1265 / 1471	0.90	0.52
25 - Multiple Choice	91%	A	9%	9%	B	1	1337 / 1471	0.94	0.44
26 - Multiple Choice	93%	A	7%	7%	B	1	1366 / 1471	0.95	0.36
27 - Multiple Choice	93%	A	7%	7%	B	1	1361 / 1471	0.95	0.29
Summary	87%		13%				1274 / 1471		

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.1.NBT.C.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds

tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

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- 2 - Multiple Choice** **CCSS.Math.Content.1.NBT.C.6** Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
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- 3 - Multiple Choice** **CCSS.Math.Content.1.NBT.C.5** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
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- 4 - Multiple Choice** **CCSS.Math.Content.1.MD.B.3** Tell and write time in hours and half-hours using analog and digital clocks.
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- 5 - Multiple Choice** **CCSS.Math.Content.1.MD.B.3** Tell and write time in hours and half-hours using analog and digital clocks.
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- 6 - Multiple Choice** **CCSS.Math.Content.1.MD.A.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object.
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- 7 - Multiple Choice** **CCSS.Math.Content.1.NBT.A.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
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- 8 - Multiple Choice** **CCSS.Math.Content.1.NBT.A.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
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- 9 - Multiple Choice** **CCSS.Math.Content.1.NBT.B.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
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- 10 - Multiple Choice** **CCSS.Math.Content.1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
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- 11 - Multiple Choice** **CCSS.Math.Content.1.MD.B.3** Tell and write time in hours and half-hours using analog and digital clocks.
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- 12 - Multiple Choice** **CCSS.Math.Content.1.OA.B.4** Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.
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- 13 - Multiple Choice** **CCSS.Math.Content.1.OA.B.4** Understand subtraction as an unknown-addend problem. For example, subtract $10 - 8$ by finding the number that makes 10 when added to 8.
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- 14 - Multiple Choice** **CCSS.Math.Content.1.OA.A.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
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- 15 - Multiple Choice** **CCSS.Math.Content.1.OA.A.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
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- 16 - Multiple Choice** **CCSS.Math.Content.1.NBT.A.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
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- 17 - Multiple Choice** **CCSS.Math.Content.1.NBT.B.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
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- 18 - Multiple Choice** **CCSS.Math.Content.1.OA.B.3** Apply properties of operations as strategies to add and subtract. Students need not use formal terms for these properties. Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)
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- 19 - Multiple Choice** **CCSS.Math.Content.1.OA.D.8** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.
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- 20 - Multiple Choice CCSS.Math.Content.1.OA.C.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
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- 21 - Multiple Choice CCSS.Math.Content.1.OA.D.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.
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- 22 - Multiple Choice CCSS.Math.Content.1.OA.D.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.
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- 23 - Multiple Choice CCSS.Math.Content.1.OA.C.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
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- 24 - Multiple Choice CCSS.Math.Content.1.OA.C.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).
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- 25 - Multiple Choice CCSS.Math.Content.1.OA.C.5** Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).
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- 26 - Multiple Choice CCSS.Math.Content.1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
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- 27 - Multiple Choice CCSS.Math.Content.1.MD.C.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.
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