

## 2010 Grade 5 Mathematics Item Analysis- Multiple Choice Items

### MATH Question 1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	112	.1	.1	.1
*	62	.0	.0	.1
1	10877	5.3	5.3	5.4
2	30078	14.8	14.8	20.2
4	7611	3.7	3.7	23.9
C	154897	76.1	76.1	100.0
Total	203637	100.0	100.0	

### MATH Question 2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	130	.1	.1	.1
*	77	.0	.0	.1
2	23026	11.3	11.3	11.4
3	7701	3.8	3.8	15.2
4	18593	9.1	9.1	24.3
A	154110	75.7	75.7	100.0
Total	203637	100.0	100.0	

### MATH Question 3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	97	.0	.0	.0
*	84	.0	.0	.1
1	4174	2.0	2.0	2.1
3	10001	4.9	4.9	7.0
4	3008	1.5	1.5	8.5
B	186273	91.5	91.5	100.0
Total	203637	100.0	100.0	

### MATH Question 4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100	.0	.0	.0
*	93	.0	.0	.1
1	1549	.8	.8	.9
2	5547	2.7	2.7	3.6
3	11753	5.8	5.8	9.4
D	184595	90.6	90.6	100.0
Total	203637	100.0	100.0	

**MATH Question 5**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	325	.2	.2	.2
*	77	.0	.0	.2
2	17245	8.5	8.5	8.7
3	21921	10.8	10.8	19.4
4	10864	5.3	5.3	24.8
A	153205	75.2	75.2	100.0
Total	203637	100.0	100.0	

**MATH Question 6**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	88	.0	.0	.0
*	47	.0	.0	.1
1	1430	.7	.7	.8
2	11480	5.6	5.6	6.4
4	1525	.7	.7	7.2
C	189067	92.8	92.8	100.0
Total	203637	100.0	100.0	

**MATH Question 7**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	268	.1	.1	.1
*	52	.0	.0	.2
1	7403	3.6	3.6	3.8
2	16474	8.1	8.1	11.9
4	14437	7.1	7.1	19.0
C	165003	81.0	81.0	100.0
Total	203637	100.0	100.0	

**MATH Question 8**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	226	.1	.1	.1
*	66	.0	.0	.1
1	14368	7.1	7.1	7.2
3	16788	8.2	8.2	15.4
4	17691	8.7	8.7	24.1
B	154498	75.9	75.9	100.0
Total	203637	100.0	100.0	

**MATH Question 9**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	232	.1	.1	.1
*	46	.0	.0	.1
1	12652	6.2	6.2	6.3
2	18915	9.3	9.3	15.6
4	24166	11.9	11.9	27.5
C	147626	72.5	72.5	100.0
Total	203637	100.0	100.0	

**MATH Question 10**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	179	.1	.1	.1
*	66	.0	.0	.1
1	24617	12.1	12.1	12.2
2	24406	12.0	12.0	24.2
4	11847	5.8	5.8	30.0
C	142522	70.0	70.0	100.0
Total	203637	100.0	100.0	

**MATH Question 11**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	109	.1	.1	.1
*	44	.0	.0	.1
1	5717	2.8	2.8	2.9
3	16470	8.1	8.1	11.0
4	13264	6.5	6.5	17.5
B	168033	82.5	82.5	100.0
Total	203637	100.0	100.0	

**MATH Question 12**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	148	.1	.1	.1
*	79	.0	.0	.1
1	7779	3.8	3.8	3.9
2	42054	20.7	20.7	24.6
3	15171	7.5	7.5	32.0
D	138406	68.0	68.0	100.0
Total	203637	100.0	100.0	

**MATH Question 13**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	206	.1	.1	.1
*	38	.0	.0	.1
1	7885	3.9	3.9	4.0
2	5095	2.5	2.5	6.5
4	13674	6.7	6.7	13.2
C	176739	86.8	86.8	100.0
Total	203637	100.0	100.0	

**MATH Question 14**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	159	.1	.1	.1
*	68	.0	.0	.1
1	12876	6.3	6.3	6.4
3	44860	22.0	22.0	28.5
4	12047	5.9	5.9	34.4
B	133627	65.6	65.6	100.0
Total	203637	100.0	100.0	

**MATH Question 15**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	277	.1	.1	.1
*	92	.0	.0	.2
1	48670	23.9	23.9	24.1
2	9640	4.7	4.7	28.8
3	20524	10.1	10.1	38.9
D	124434	61.1	61.1	100.0
Total	203637	100.0	100.0	

**MATH Question 16**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	169	.1	.1	.1
*	53	.0	.0	.1
1	6407	3.1	3.1	3.3
2	24355	12.0	12.0	15.2
4	2699	1.3	1.3	16.5
C	169954	83.5	83.5	100.0
Total	203637	100.0	100.0	

**MATH Question 17**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	308	.2	.2	.2
*	54	.0	.0	.2
2	8427	4.1	4.1	4.3
3	33045	16.2	16.2	20.5
4	24949	12.3	12.3	32.8
A	136854	67.2	67.2	100.0
Total	203637	100.0	100.0	

**MATH Question 18**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	176	.1	.1	.1
*	67	.0	.0	.1
2	5205	2.6	2.6	2.7
3	18557	9.1	9.1	11.8
4	8671	4.3	4.3	16.0
A	170961	84.0	84.0	100.0
Total	203637	100.0	100.0	

**MATH Question 19**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	177	.1	.1	.1
*	31	.0	.0	.1
1	8225	4.0	4.0	4.1
2	2571	1.3	1.3	5.4
4	1603	.8	.8	6.2
C	191030	93.8	93.8	100.0
Total	203637	100.0	100.0	

**MATH Question 20**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	416	.2	.2	.2
*	136	.1	.1	.3
2	43124	21.2	21.2	21.4
3	12080	5.9	5.9	27.4
4	33530	16.5	16.5	43.8
A	114351	56.2	56.2	100.0
Total	203637	100.0	100.0	

**MATH Question 21**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	320	.2	.2	.2
*	103	.1	.1	.2
1	20112	9.9	9.9	10.1
2	14133	6.9	6.9	17.0
3	17437	8.6	8.6	25.6
D	151532	74.4	74.4	100.0
Total	203637	100.0	100.0	

**MATH Question 22**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	559	.3	.3	.3
*	81	.0	.0	.3
1	12397	6.1	6.1	6.4
2	16472	8.1	8.1	14.5
4	21433	10.5	10.5	25.0
C	152695	75.0	75.0	100.0
Total	203637	100.0	100.0	

**MATH Question 23**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	459	.2	.2	.2
*	101	.0	.0	.3
1	10771	5.3	5.3	5.6
2	8580	4.2	4.2	9.8
3	13267	6.5	6.5	16.3
D	170459	83.7	83.7	100.0
Total	203637	100.0	100.0	

**MATH Question 24**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	550	.3	.3	.3
*	88	.0	.0	.3
1	29685	14.6	14.6	14.9
2	11824	5.8	5.8	20.7
4	24902	12.2	12.2	32.9
C	136588	67.1	67.1	100.0
Total	203637	100.0	100.0	

**MATH Question 25**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	667	.3	.3	.3
*	42	.0	.0	.3
1	9361	4.6	4.6	4.9
2	8130	4.0	4.0	8.9
3	8745	4.3	4.3	13.2
D	176692	86.8	86.8	100.0
Total	203637	100.0	100.0	

**MATH Question 26**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	828	.4	.4	.4
*	29	.0	.0	.4
1	12867	6.3	6.3	6.7
2	5179	2.5	2.5	9.3
3	5786	2.8	2.8	12.1
D	178948	87.9	87.9	100.0
Total	203637	100.0	100.0	

**2010 Grade 5 Mathematics Item Analysis- Constructed Response Items**

**Descriptive Statistics**

	N	Mean		Std.
	Statistic	Statistic	Std. Error	Statistic
MATH Q27 Score Value	203447	1.6757	.00134	.60347
MATH Q28 Score Value	203370	1.2916	.00167	.75292
MATH Q29 Score Value	203469	1.4837	.00123	.55671
MATH Q30 Score Value	202728	1.3091	.00187	.84331
MATH Q31 Score Value	203084	2.0697	.00239	1.07920
MATH Q32 Score Value	203336	2.3448	.00190	.85646
MATH Q33 Score Value	203377	2.0316	.00195	.87925
Math Q34 Score Value	203326	1.7498	.00265	1.19392
Valid N (listwise)	202034			

**2010 Grade 5 Mathematics Item Analysis- SPI Items**

### Descriptive Statistics

	N	Mean		Std.
	Statistic	Statistic	Std. Error	Statistic
MATH Standard 1 Performance Index	203637	76.98	.045	20.248
MATH Standard 2 Performance Index	203637	76.31	.036	16.402
MATH Standard 3 Performance Index	203637	75.80	.044	19.967
MATH Standard 4 Performance Index	203637	63.49	.055	24.684
MATH Standard 5 Performance Index	203637	71.92	.044	19.803
Valid N (listwise)	203637			