

2008 Grade 4 Mathematics Item Analysis- Multiple Choice

MATH Question 1

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	580	.3	.3	.3
*	36	.0	.0	.3
1	2452	1.2	1.2	1.5
2	7289	3.7	3.7	5.2
4	3236	1.6	1.6	6.8
C	185358	93.2	93.2	100.0
Total	198951	100.0	100.0	

MATH Question 2

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	587	.3	.3	.3
*	32	.0	.0	.3
1	1733	.9	.9	1.2
3	2015	1.0	1.0	2.2
4	571	.3	.3	2.5
B	194013	97.5	97.5	100.0
Total	198951	100.0	100.0	

MATH Question 3

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	626	.3	.3	.3
*	71	.0	.0	.4
2	16728	8.4	8.4	8.8
3	8294	4.2	4.2	12.9
4	1988	1.0	1.0	13.9
A	171244	86.1	86.1	100.0
Total	198951	100.0	100.0	

MATH Question 4

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	686	.3	.3	.3
*	126	.1	.1	.4
2	16978	8.5	8.5	8.9
3	11369	5.7	5.7	14.7
4	17772	8.9	8.9	23.6
A	152020	76.4	76.4	100.0
Total	198951	100.0	100.0	

MATH Question 5

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	678	.3	.3	.3
*	53	.0	.0	.4
1	15161	7.6	7.6	8.0
2	5087	2.6	2.6	10.5
4	2093	1.1	1.1	11.6
C	175879	88.4	88.4	100.0
Total	198951	100.0	100.0	

MATH Question 6

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	621	.3	.3	.3
*	62	.0	.0	.3
1	6206	3.1	3.1	3.5
3	12049	6.1	6.1	9.5
4	7189	3.6	3.6	13.1
B	172824	86.9	86.9	100.0
Total	198951	100.0	100.0	

MATH Question 7

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	742	.4	.4	.4
*	60	.0	.0	.4
1	21578	10.8	10.8	11.2
2	22411	11.3	11.3	22.5
4	14504	7.3	7.3	29.8
C	139656	70.2	70.2	100.0
Total	198951	100.0	100.0	

MATH Question 8

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	639	.3	.3	.3
*	48	.0	.0	.3
1	20697	10.4	10.4	10.7
2	5655	2.8	2.8	13.6
4	4624	2.3	2.3	15.9
C	167288	84.1	84.1	100.0
Total	198951	100.0	100.0	

MATH Question 9

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	647	.3	.3	.3
*	32	.0	.0	.3
1	9300	4.7	4.7	5.0
3	6245	3.1	3.1	8.2
4	5733	2.9	2.9	11.0
B	176994	89.0	89.0	100.0
Total	198951	100.0	100.0	

MATH Question 10

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	664	.3	.3	.3
*	76	.0	.0	.4
1	20167	10.1	10.1	10.5
2	12201	6.1	6.1	16.6
4	7918	4.0	4.0	20.6
C	157925	79.4	79.4	100.0
Total	198951	100.0	100.0	

MATH Question 11

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	665	.3	.3	.3
*	58	.0	.0	.4
2	12092	6.1	6.1	6.4
3	5404	2.7	2.7	9.2
4	7048	3.5	3.5	12.7
A	173684	87.3	87.3	100.0
Total	198951	100.0	100.0	

MATH Question 12

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	717	.4	.4	.4
*	97	.0	.0	.4
2	24418	12.3	12.3	12.7
3	58903	29.6	29.6	42.3
4	10173	5.1	5.1	47.4
A	104643	52.6	52.6	100.0
Total	198951	100.0	100.0	

MATH Question 13

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	697	.4	.4	.4
*	71	.0	.0	.4
1	21036	10.6	10.6	11.0
2	6443	3.2	3.2	14.2
4	23038	11.6	11.6	25.8
C	147666	74.2	74.2	100.0
Total	198951	100.0	100.0	

MATH Question 14

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	671	.3	.3	.3
*	58	.0	.0	.4
1	9799	4.9	4.9	5.3
2	7066	3.6	3.6	8.8
3	1723	.9	.9	9.7
D	179634	90.3	90.3	100.0
Total	198951	100.0	100.0	

MATH Question 15

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	765	.4	.4	.4
*	79	.0	.0	.4
1	6832	3.4	3.4	3.9
2	9868	5.0	5.0	8.8
3	16157	8.1	8.1	16.9
D	165250	83.1	83.1	100.0
Total	198951	100.0	100.0	

MATH Question 16

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	767	.4	.4	.4
*	70	.0	.0	.4
2	24511	12.3	12.3	12.7
3	20681	10.4	10.4	23.1
4	18902	9.5	9.5	32.6
A	134020	67.4	67.4	100.0
Total	198951	100.0	100.0	

MATH Question 17

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	749	.4	.4	.4
*	96	.0	.0	.4
2	13321	6.7	6.7	7.1
3	24426	12.3	12.3	19.4
4	10330	5.2	5.2	24.6
A	150029	75.4	75.4	100.0
Total	198951	100.0	100.0	

MATH Question 18

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	830	.4	.4	.4
*	79	.0	.0	.5
1	22552	11.3	11.3	11.8
2	14554	7.3	7.3	19.1
4	20997	10.6	10.6	29.7
C	139939	70.3	70.3	100.0
Total	198951	100.0	100.0	

MATH Question 19

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	711	.4	.4	.4
*	71	.0	.0	.4
1	54605	27.4	27.4	27.8
2	4317	2.2	2.2	30.0
3	7327	3.7	3.7	33.7
D	131920	66.3	66.3	100.0
Total	198951	100.0	100.0	

MATH Question 20

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	691	.3	.3	.3
*	57	.0	.0	.4
1	18523	9.3	9.3	9.7
3	54015	27.1	27.1	36.8
4	10176	5.1	5.1	42.0
B	115489	58.0	58.0	100.0
Total	198951	100.0	100.0	

MATH Question 21

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	739	.4	.4	.4
*	59	.0	.0	.4
1	23633	11.9	11.9	12.3
3	15913	8.0	8.0	20.3
4	10261	5.2	5.2	25.4
B	148346	74.6	74.6	100.0
Total	198951	100.0	100.0	

MATH Question 22

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	727	.4	.4	.4
*	76	.0	.0	.4
1	11042	5.6	5.6	6.0
3	25793	13.0	13.0	18.9
4	5319	2.7	2.7	21.6
B	155994	78.4	78.4	100.0
Total	198951	100.0	100.0	

MATH Question 23

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	828	.4	.4	.4
*	117	.1	.1	.5
1	18150	9.1	9.1	9.6
2	12359	6.2	6.2	15.8
4	39581	19.9	19.9	35.7
C	127916	64.3	64.3	100.0
Total	198951	100.0	100.0	

MATH Question 24

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	798	.4	.4	.4
*	104	.1	.1	.5
1	5720	2.9	2.9	3.3
3	18125	9.1	9.1	12.4
4	48654	24.5	24.5	36.9
B	125550	63.1	63.1	100.0
Total	198951	100.0	100.0	

MATH Question 25

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	910	.5	.5	.5
*	128	.1	.1	.5
1	9583	4.8	4.8	5.3
3	31854	16.0	16.0	21.3
4	30903	15.5	15.5	36.9
B	125573	63.1	63.1	100.0
Total	198951	100.0	100.0	

MATH Question 26

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	969	.5	.5	.5
*	165	.1	.1	.6
1	24524	12.3	12.3	12.9
2	4366	2.2	2.2	15.1
4	74061	37.2	37.2	52.3
C	94866	47.7	47.7	100.0
Total	198951	100.0	100.0	

MATH Question 27

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1062	.5	.5	.5
*	94	.0	.0	.6
2	13625	6.8	6.8	7.4
3	24763	12.4	12.4	19.9
4	9092	4.6	4.6	24.4
A	150315	75.6	75.6	100.0
Total	198951	100.0	100.0	

MATH Question 28

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1029	.5	.5	.5
*	168	.1	.1	.6
1	21629	10.9	10.9	11.5
3	22269	11.2	11.2	22.7
4	59519	29.9	29.9	52.6
B	94337	47.4	47.4	100.0
Total	198951	100.0	100.0	

MATH Question 29

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1193	.6	.6	.6
*	107	.1	.1	.7
2	17698	8.9	8.9	9.5
3	26855	13.5	13.5	23.0
4	30445	15.3	15.3	38.4
A	122653	61.6	61.6	100.0
Total	198951	100.0	100.0	

MATH Question 30

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1831	.9	.9	.9
*	96	.0	.0	1.0
1	5422	2.7	2.7	3.7
2	10121	5.1	5.1	8.8
3	33392	16.8	16.8	25.6
D	148089	74.4	74.4	100.0
Total	198951	100.0	100.0	

2008 Grade 4 Mathematics Item Analysis Constructed Response

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MATH Question 31	198269	0	2	1.67	.642
MATH Question 32	198123	0	2	1.52	.718
MATH Question 33	198192	0	2	1.42	.638
MATH Question 34	197766	0	2	1.19	.919
MATH Question 35	198007	0	3	2.03	1.100
MATH Question 36	197842	0	2	1.22	.900
MATH Question 37	197810	0	2	1.69	.651
MATH Question 38	197809	0	2	1.25	.770
MATH Question 39	198009	0	3	2.21	.876
MATH Question 40	198271	0	2	1.59	.712
MATH Question 41	198165	0	2	1.82	.466
MATH Question 42	198132	0	2	1.43	.743
MATH Question 43	198149	0	3	2.53	.865
MATH Question 44	198173	0	3	2.36	.911
MATH Question 45	198072	0	2	1.30	.879
MATH Question 46	197978	0	2	1.41	.865
MATH Question 47	197950	0	2	1.77	.517
MATH Question 48	197719	0	2	1.68	.565
Valid N (listwise)	195236				