

2009 Erasure Analysis

New Jersey Assessment of Skills and Knowledge (NJ ASK 3-8)

The erasure analysis for NJ ASK grades 3 through 8 revealed a total of 2,100,916 erasures. Quality control checks and verification procedures were implemented to ensure that reported erasures are valid. The percentage of Wrong to Right (WTR) erasures and the mean number of erasures per student were two critical pieces of information for the erasure analysis. The percentage of WTR erasures were calculated by dividing the number of erasures that changed an incorrect response to a correct response by the total number of erasures. These calculations were performed at the state, grade, content area, DFG, and school levels. The mean number of WTR erasures per student was calculated by dividing the number of WTR erasures by the total number of students. The calculations were conducted at the state and school level for all schools and grade levels.

Of these 2,100,916 erasures, **56.87%** of the erasures involved changing an incorrect response to a correct response. Table 1a shows the total erasures and percentage of each type of change by grade. A comparison of the erasure results from 2009 (Table 1 a) with those from 2008 (Table 1b) reveals that more erasures by grade occurred in 2009 than in 2008. This increase is due in part to the inclusion of data from grades 3 and 4; however, increases were also observed in grades 5 through 8. The percentages of erasure types have remained fairly constant across the two years, however.

Table 1a: Erasures by Grade 2009

Grade	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
3	156065	60.62	15.25	24.17
4	308042	55.03	19.41	25.6
5	358987	58.45	15.61	26.01
6	377861	59.88	15.86	24.33
7	286469	56.68	16.18	27.2
8	613492	54.15	18.7	27.2
Total	2,100,916	56.87	17.17	26.02

Table 1b: Erasures by Grade 2008

Grade	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
5	263087	59.84	14.83	25.33
6	239683	58.12	15.81	26.07
7	245102	58.22	17.25	24.52
8	453721	56.64	18.65	24.72
Total	1,201,593	57.96	16.96	25.08

Tables 2a and 2b show the total erasures and percentage of each change by content area for 2009 and 2008, respectively. As was the case in 2008, a slightly higher percentage of WTR erasures occurred in LAL; whereas, the lowest percentage occurred in science.

Table 2a: Erasures by Content Area 2009

Subject	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
LAL	858286	58.68	17.16	24.23
Math	886349	57.99	15.31	26.75
Science	356281	49.73	21.8	28.52
Total	2,100,916	56.87	17.17	26.02

Table 2b: Erasures by Content Area 2008

Subject	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
LAL	504440	60.66	17.18	22.16
Math	497670	57.84	14.76	27.40
Science	199483	51.43	21.90	26.67
Total	1,201,593	57.96	16.96	25.08

Table 3 shows the erasure types by grade and content area. The largest percentage of WTR erasures occur in grade 6 for LAL, in grade 3 for mathematics, and in grade 4 for science. Total erasures vary widely in LAL across grades; whereas, the variance is much less across the grades in mathematics and fairly moderate in science.

Table 3: Erasures by Subject/Grade

Subject	Grade	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong To Wrong
LAL	3	49126	53.52	18.58	27.94
	4	60297	52.30	21.58	26.18
	5	170552	58.62	16.64	24.83
	6	204777	62.70	15.61	21.77
	7	153323	57.51	16.78	25.75
	8	220842	58.7	17.74	23.64
Math	3	106998	63.88	13.72	22.44
	4	122329	61.17	14.01	24.87
	5	188691	58.30	14.67	27.08
	6	173364	56.55	16.16	27.35
	7	133295	55.72	15.48	28.87
	8	162153	54.76	17.04	28.25
Science	4	125562	50.36	23.64	26.04
	8	230877	49.38	20.79	29.87
Total		2,100,916	56.87	17.17	26.02

Table 4 shows the total erasures and percentage of each type of erasure by DFG. When sorted by the percentage of erasures making a change from wrong to right, a moderate pattern in the DFG order emerges suggesting a higher percentage of the erasures resulted in a change from an incorrect response to a correct response in the more affluent DFGs.

Table 4: Erasures by DFG

DFG	Total Erasures	% Wrong To Right	% Right To Wrong	% Wrong to Wrong
O	836	39.16	21.44	39.52
N	9837	49.90	18.67	31.52
A	402180	50.04	18.52	31.51
B	216150	53.39	17.79	28.88
R	36526	53.82	17.67	28.50
CD	204618	54.84	17.78	27.45
DE	265345	57.23	17.06	25.77
FG	257964	58.31	16.81	24.95
GH	269570	59.98	16.47	23.60
V	153	60.13	15.69	24.18
I	355954	62.60	16.13	21.31
J	83053	66.02	15.20	18.82
Total	2,100,916	56.87	17.17	26.02

Table 5 displays the average number of WTR erasures per student by school. The statewide WTR erasure rate per student is 1.79 with a standard deviation of 0.73 based on data from 1911 schools. Only schools with mean WTR erasure rates equal to or greater than 2 standard deviations above or below the mean are displayed in Table 5. Schools with fewer than 30 examinees are not reported in Table 5.

In 2008, a slightly different analysis was conducted to identify the schools with higher than average WTR erasure rates. In 2008, any school that had 25% more WTR erasures than the statewide mean of 57.96 was classified as having a high WTR erasure rate. Though different methodologies were applied across the two years, two schools were identified as having high WTR erasure rates in both years. Those schools are Roosevelt (34380080) and Grove St (132330110). In addition, Grove St and Paterson CS for Science have per student WTR erasure rates more than 10 standard deviations above the statewide rate.

Table 5: Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
132330110	Grove St	186	1909	10.26
807503970	Paterson CS For Sci	250	2525	10.10
133570170	Abington Ave	619	4205	6.79
170220060	Horace Mann #6	320	1974	6.17
34380060	Grant	120	558	4.65
133570630	Roseville Avenue E.S.	58	268	4.62
131210190	Johnnie L Cochran J	142	656	4.62
133570180	Alexander St	416	1872	4.50
31550100	Lewis F. Cole Middle	477	2123	4.45
34380070	Lincoln Elem School	190	839	4.42
133570430	Franklin E.S.	163	714	4.38
30890050	Number 3	173	713	4.12
34380080	Roosevelt	227	931	4.10
294950060	Southern Reg Middle	996	4009	4.03
15350040	Ventnor Middle School	411	1649	4.01
33910050	Palisades Park Jr-Sr H	116	452	3.90
172210063	Calabro	104	405	3.89
274560055	Eisenhower Middle	673	2598	3.86
10110050	Chelsea Heights	271	1044	3.85
354820055	Somerville Middle	333	1270	3.81
131210093	Fourth Avenue School	147	544	3.70
273100060	Mendham Twp Middle	463	1709	3.69
12680020	Belhaven Middle Sch	442	1626	3.68
133880110	Oakwood Ave	147	538	3.66

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
231170055	Churchill Jr	713	2608	3.66
130410080	Carteret	251	911	3.63
175580050	Weehawken High	175	635	3.63
35880050	Woodcliff Middle School	299	1080	3.61
806018900	Central Jersey College	79	285	3.61
34390070	George Washington Middle	663	2359	3.56
251260070	Memorial	265	928	3.50
251660023	Clifton T. Barkalow	814	2821	3.47
133880060	Central	151	523	3.46
355540050	Valley View	330	1142	3.46
255420075	Intermediate	1008	3488	3.46
131210110	Dionne Warwick Institute	225	774	3.44
133570350	Cleveland	218	749	3.44
71900070	Middle	542	1860	3.43
252290027	Howell Twp M S South	1020	3458	3.39
131210135	Sojourner Truth Mid	399	1349	3.38
391320150	No 12 Elmora	352	1183	3.36
10110070	New York Avenue School	331	1104	3.34
133570690	Speedway Avenue E.S.	97	323	3.33
133570718	Vailsburg Middle School	82	273	3.33
31230040	Alfred S. Faust	302	993	3.29
315690070	Memorial	463	1520	3.28
131210090	Whitney E. Houston	400	1310	3.28
391320230	No 20 John Marshall	200	653	3.27
211950080	Emily C Reynolds Middle	1100	3578	3.25
35755050	Westwood Junior/Senior	421	1369	3.25
234660120	Wilson E.S.	77	25	0.32
233140065	Hazelwood E.S.	39	12	0.31
33060070	Memorial E.S.	94	27	0.29
253040080	Strathmore E.S.	106	25	0.24
234660060	Arleth E.S.	116	25	0.22

Table 6 shows the mean and standard deviation for the statewide WTR erasure rate per student at each grade level. Tables 7 through 12 show the average number of WTR erasures per student by school at the respective grade level. Only schools with mean WTR erasure rates equal to or greater than 2 standard deviations above or below the mean are displayed in Tables 7-12. Again, schools with fewer than 30 examinees are not reported.

Table 6: Descriptive Statistics for Schools by Grade Level

Grade	Mean WTR Erasure Rate	Standard Deviation	2 SD Above Mean	2 SD Below Mean
3	0.97	0.53	2.02	-0.08
4	1.71	0.82	3.35	0.07
5	2.09	0.92	3.92	0.26
6	2.26	1.06	4.38	0.13
7	1.61	0.78	3.17	0.05
8	3.24	1.27	5.77	0.71

Table 7: Grade 3 - Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
131210090	Whitney E. Houston	63	354	5.62
10110070	New York Avenue School	54	284	5.26
132330110	Grove St	62	305	4.92
133570430	Franklin E.S.	82	387	4.72
10110050	Chelsea Heights	32	141	4.41
391320230	No 20 John Marshall	46	186	4.04
391320180	No 15 C Columbus	45	176	3.91
133570460	Hawkins St	59	208	3.53
172390200	Number 22	78	273	3.50
131210093	Fourth Avenue School	36	125	3.47
807820970	Schomburg CS	34	116	3.41
133570630	Roseville Avenue E.S.	30	96	3.20
806013900	Bergen Arts And Sciences	55	165	3.00
54050085	Howard L. Emmons E.S.	65	195	3.00
133880110	Oakwood Ave	32	95	2.97
133570170	Abington Ave	105	293	2.79
172390130	Kennedy Number 9	31	84	2.71
211950250	Uni Hts/H.D. Morrison	61	161	2.64
10110080	Uptown School Compl	60	158	2.63
131210110	Dionne Warwick Institute	73	187	2.56
233530123	Paul Robeson Comm	65	164	2.52
235850280	Ross Street	80	192	2.40
131210190	Johnnie L Cochran J	50	119	2.38
170220060	Horace Mann #6	53	126	2.38
235850210	Lynn Crest	38	90	2.37
373840050	Ogdensburg	33	78	2.36

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
133570200	Ann St	142	329	2.32
175240090	Hudson	71	164	2.31
133570300	Burnet St	59	136	2.31
30890050	Number 3	40	91	2.28
233530080	Lincoln	30	66	2.20
295190064	Beachwood Elem	90	198	2.20
211950105	George E. Wilson	53	116	2.19
175240118	Veteran's Memorial School	77	167	2.17
170220085	Midtown Community S	120	258	2.15
31700080	Lincoln School #6	62	133	2.15
215210240	Luis Munoz-Rivera Elem	50	107	2.14
133570575	Rafael Hernandez School	36	77	2.14
34380080	Roosevelt	59	126	2.14
215210160	Cadwalader	30	64	2.13
172210065	Connors	47	99	2.11
172390120	Number 8	89	187	2.10
133570350	Cleveland	43	90	2.09
53440050	Hillside E.S.	69	144	2.09
133570710	Sussex Ave	55	114	2.07
133570500	Madison Elem.	76	156	2.05
175240130	Robert Waters	135	275	2.04

Table 7: Grade 4 - Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
132330110	Grove St	58	609	10.50
131210190	Johnnie L Cochran J	46	423	9.20
133570710	Sussex Ave	44	281	6.39
10110050	Chelsea Heights	30	176	5.87
30890080	Number 6	53	305	5.75
10110070	New York Ave. School	53	287	5.42
391320150	No 12 Elmora	75	405	5.40
215210240	Luis Munoz-Rivera Ele	39	204	5.23
131210080	Langston Hughes Sch	70	342	4.89
175240090	Hudson	65	313	4.82
33600060	Jefferson	50	239	4.78

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
131210110	Dionne Warwick Inst	78	372	4.77
133570170	Abington Ave	96	447	4.66
170220060	Horace Mann #6	48	223	4.65
133570690	Speedway Avenue E.S.	52	236	4.54
133570300	Burnet St	44	195	4.43
133570615	Roberto Clemente E.S.	99	435	4.39
10590045	Collings Lake Elem Sch	38	165	4.34
295190064	Beachwood Elem	81	348	4.30
30890050	Number 3	44	187	4.25
806910940	Jersey City Communi	67	277	4.13
233530125	Roosevelt Elem	97	396	4.08
133880060	Central	42	171	4.07
133570430	Franklin E.S.	81	327	4.04
131210050	Edward T. Bowser; Sr.	114	458	4.02
175240080	Sara M Gilmore	60	241	4.02
133570420	Fourteenth Avenue E.S.	30	120	4.00
30300080	Washington	41	163	3.98
373300050	Montague Twp	40	156	3.90
215210290	Stokes	46	176	3.83
806420925	Elysian Cs Of Hoboken	31	118	3.81
295190065	Cedar Grove Elem	109	414	3.80
110540130	West Ave	43	163	3.79
30300040	Franklin	74	273	3.69
211950110	Greenwood	47	173	3.68
32740065	Hilltop	54	198	3.67
133880110	Oakwood Ave	42	153	3.64
315570090	Lafayette	60	218	3.63
391320230	No 20 John Marshall	38	138	3.63
215210230	Jefferson	32	115	3.59
10110080	Uptown School Compl	65	230	3.54
394550060	Ernest J Finizio-Aldene	47	165	3.51
215210300	Washington	63	220	3.49
35410050	Julia A Traphagen	60	209	3.48
131210090	Whitney E. Houston	67	233	3.48
132330091	Chancellor South E.S.	37	127	3.43
131210093	Fourth Avenue School	47	161	3.43
131210170	J Garfield Jackson	47	161	3.43
807115960	Learning Community	36	123	3.42

School Code	School Name	# Students	# Wrong to Right Erasures	Mean # WTR Erasures/Student
133880070	Cleveland St	49	164	3.35

Table 8: Grade 5 - Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong To Right Erasures	Mean # WTR Erasures/Student
132330110	Grove St	66	995	15.08
133570170	Abington Ave	106	786	7.42
170220060	Horace Mann #6	51	336	6.59
133570350	Cleveland	30	190	6.33
34380060	Grant	36	222	6.17
130410080	Carteret	68	419	6.16
34380080	Roosevelt	52	313	6.02
215210235	Joyce Kilmer	42	235	5.60
133880110	Oakwood Ave	35	188	5.37
30890050	Number 3	42	210	5.00
133570500	Madison Elem.	85	421	4.95
375040050	Stillwater Twp	56	277	4.95
133570580	Newton St	33	157	4.76
30300040	Franklin	62	288	4.65
133880060	Central	38	168	4.42
292500050	Lakehurst Elem	46	203	4.41
34380070	Lincoln Elem School	53	230	4.34
133570180	Alexander St	77	331	4.30
172210065	Connors	45	193	4.29
392660090	Number 2	51	212	4.16
214255110	Community Park	41	169	4.12
131210093	Fourth Avenue School	64	258	4.03
133880100	Lincoln Ave	65	260	4.00
290185010	Lillian M Dunfee El	53	212	4.00
11300030	Fanny D. Rittenberg M	33	132	4.00
235850280	Ross Street	92	362	3.93
153490050	National Park	43	169	3.93
51420030	Frances Demasi Elem	51	9	0.18

Table 9: Grade 6 - Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong To Right Erasures	Mean # WTR Erasures/Student
34380070	Lincoln Elem School	39	392	10.05
133570170	Abington Ave	98	975	9.95
170220060	Horace Mann #6	56	512	9.14
807503970	Paterson Cs For Sci	84	719	8.56
133570180	Alexander St	81	520	6.42
34380080	Roosevelt	55	332	6.04
251260080	Meadowbrook	48	252	5.25
34380060	Grant	30	155	5.17
110540055	Cherry Street	45	220	4.89
95800030	Crest Memorial	37	180	4.86
30890050	Number 3	47	225	4.79
170220140	Number 14	49	230	4.69
133880120	Park Ave	40	182	4.55
130410080	Carteret	71	313	4.41
15350040	Ventnor Middle Sch	105	460	4.38

Table 10: Grade 7 - Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong To Right Erasures	Mean # WTR Erasures/Student
133570180	Alexander St	64	601	9.39
807503970	Paterson CS For Sci	82	535	6.52
252720050	Markham Place	86	324	3.77
133570170	Abington Ave	124	464	3.74
215210240	Luis Munoz-Rivera El	72	254	3.53
133570610	Ridge St	87	293	3.37
12680020	Belhaven Middle Sch	120	403	3.36
15350040	Ventnor Mid School	94	307	3.27
175240140	Woodrow Wilson	55	175	3.18

Table 11: Grade 8 - Mean Student Erasure Rate by School

School Code	School Name	# Students	# Wrong To Right Erasures	Mean # WTR Erasures/Student
807503970	Paterson CS for Sci	84	1271	15.13
133570170	Abington Ave	90	1240	13.78
170220060	Horace Mann #6	62	656	10.58
31550100	Lewis F. Cole Mid	243	1623	6.68
170220140	Number 14	48	315	6.56
31070040	Demarest Middle	86	559	6.50
175240140	Woodrow Wilson	47	290	6.17
35880050	Woodcliff Middle	101	603	5.97
354820055	Somerville Middle	106	626	5.91
10110050	Chelsea Heights	64	371	5.80
273100060	Mendham Twp Middle	119	685	5.76
330060020	Alloway Twp School	52	29	0.56
807730970	Robert Treat Academy CS	49	19	0.39