

## APPENDIX 24: OPERATIONAL TEST RELIABILITY BY SUBPOPULATIONS

### MATHEMATICS

**Table 24–1. Mathematics Reliability by Ethnicity**

Grade	Subpopulation Group	<i>L</i>	<i>N</i>	Mean	<i>SD</i>	Mean <i>p</i> -value	Reliability	<i>SEM</i>
3	White (Caucasian)	59	4939	47.41	11.47	0.74	0.93	3.10
	African American	59	354	39.74	12.27	0.62	0.92	3.42
	Hispanic	59	588	43.31	12.03	0.68	0.92	3.31
	Asian/Pac. Islander/Native Hawaiian	59	804	41.98	12.29	0.66	0.93	3.30
	Alaska Native and American Indian	59	2299	36.90	13.27	0.58	0.93	3.46
	Two or more races	59	750	44.82	11.93	0.70	0.93	3.25
4	White (Caucasian)	59	4945	47.07	11.34	0.74	0.92	3.20
	African American	59	376	39.62	12.63	0.62	0.92	3.49
	Hispanic	59	633	42.29	11.90	0.66	0.92	3.42
	Asian/Pac. Islander/Native Hawaiian	59	759	42.83	12.58	0.67	0.93	3.40
	Alaska Native and American Indian	59	2290	37.55	12.73	0.59	0.92	3.54
	Two or more races	59	734	44.26	12.48	0.69	0.93	3.33
5	White (Caucasian)	59	4968	47.61	11.84	0.74	0.93	3.22
	African American	59	363	41.16	13.21	0.64	0.93	3.53
	Hispanic	59	652	43.75	13.20	0.68	0.93	3.38
	Asian/Pac. Islander/Native Hawaiian	59	784	44.53	12.77	0.70	0.93	3.37
	Alaska Native and American Indian	59	2188	38.37	13.31	0.60	0.93	3.59
	Two or more races	59	670	44.14	12.63	0.69	0.93	3.37
6	White (Caucasian)	59	4871	47.80	11.17	0.75	0.92	3.15
	African American	59	351	39.90	12.45	0.62	0.92	3.51
	Hispanic	59	571	43.40	12.09	0.68	0.92	3.35
	Asian/Pac. Islander/Native Hawaiian	59	729	43.80	12.77	0.68	0.93	3.30
	Alaska Native and American Indian	59	2211	38.91	12.78	0.61	0.92	3.51
	Two or more races	59	589	45.94	11.31	0.72	0.92	3.26
7	White (Caucasian)	59	5022	47.50	11.40	0.74	0.92	3.19
	African American	59	343	37.88	13.00	0.59	0.92	3.58
	Hispanic	59	530	41.15	12.80	0.64	0.93	3.47
	Asian/Pac. Islander/Native Hawaiian	59	791	44.90	12.37	0.70	0.93	3.29
	Alaska Native and American Indian	59	2080	37.90	12.76	0.59	0.92	3.58
	Two or more races	59	593	43.14	12.88	0.67	0.93	3.37
8	White (Caucasian)	59	4989	46.04	11.50	0.72	0.92	3.25
	African American	59	293	36.99	12.23	0.58	0.92	3.53
	Hispanic	59	552	41.05	12.04	0.64	0.92	3.43
	Asian/Pac. Islander/Native Hawaiian	59	745	42.93	12.42	0.67	0.93	3.38
	Alaska Native and American Indian	59	2108	37.71	12.85	0.59	0.93	3.52
	Two or more races	59	595	42.21	12.36	0.66	0.93	3.38

*L*=Number of items, *N*=Number of persons, Mean=Average person raw score  
*SD*=Standard deviation of person raw scores, *SEM*=Standard error of measurement

**Table 24–1 (continued). Mathematics Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
9	White (Caucasian)	59	5150	46.52	11.82	0.73	0.92	3.28
	African American	59	351	37.49	12.28	0.59	0.91	3.64
	Hispanic	59	518	40.57	12.63	0.63	0.92	3.53
	Asian/Pac. Islander/Native Hawaiian	59	755	42.86	12.63	0.67	0.93	3.45
	Alaska Native and American Indian	59	2098	38.01	12.47	0.59	0.92	3.60
	Two or more races	59	514	44.01	12.61	0.69	0.93	3.40
10	White (Caucasian)	36	5000	25.77	7.46	0.64	0.86	2.77
	African American	36	320	19.55	7.12	0.49	0.84	2.82
	Hispanic	36	461	23.13	7.04	0.58	0.84	2.84
	Asian/Pac. Islander/Native Hawaiian	36	764	23.47	7.80	0.59	0.86	2.88
	Alaska Native and American Indian	36	1958	20.21	7.33	0.51	0.85	2.85
	Two or more races	36	477	23.05	7.94	0.58	0.88	2.80

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–2. Mathematics Reliability by Socioeconomic Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Not Low Income	59	4974	47.45	11.59	0.74	0.93	3.10
	Low Income	59	4760	39.90	12.94	0.62	0.93	3.40
4	Not Low Income	59	5170	46.99	11.53	0.73	0.92	3.20
	Low Income	59	4567	39.96	12.67	0.62	0.92	3.49
5	Not Low Income	59	5079	47.85	11.87	0.75	0.93	3.19
	Low Income	59	4546	40.79	13.22	0.64	0.93	3.52
6	Not Low Income	59	5002	48.05	11.19	0.75	0.92	3.13
	Low Income	59	4320	40.81	12.58	0.64	0.92	3.47
7	Not Low Income	59	5310	47.46	11.60	0.74	0.92	3.18
	Low Income	59	4049	39.83	12.80	0.62	0.92	3.53
8	Not Low Income	59	5398	46.22	11.47	0.72	0.92	3.24
	Low Income	59	3884	38.70	12.61	0.60	0.92	3.50
9	Not Low Income	59	5661	46.63	11.67	0.73	0.92	3.28
	Low Income	59	3725	38.80	12.71	0.61	0.92	3.59
10	Not Low Income	36	5689	25.52	7.57	0.64	0.86	2.79
	Low Income	36	3291	21.00	7.43	0.52	0.85	2.84

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–3. Mathematics Reliability by English Proficiency Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	English Proficient	59	8327	45.55	12.03	0.71	0.93	3.20
	Limited English Proficient	59	1407	33.10	12.25	0.52	0.92	3.52
4	English Proficient	59	8579	45.35	11.82	0.71	0.92	3.29
	Limited English Proficient	59	1158	31.43	11.19	0.49	0.90	3.62
5	English Proficient	59	8706	45.91	12.35	0.72	0.93	3.31
	Limited English Proficient	59	919	31.31	11.63	0.49	0.90	3.70
6	English Proficient	59	8409	46.05	11.74	0.72	0.92	3.24
	Limited English Proficient	59	913	32.26	11.27	0.50	0.90	3.64
7	English Proficient	59	8453	45.59	12.05	0.71	0.93	3.28
	Limited English Proficient	59	906	30.80	10.82	0.48	0.88	3.74
8	English Proficient	59	8399	44.41	11.89	0.69	0.92	3.32
	Limited English Proficient	59	883	30.35	11.20	0.47	0.90	3.63
9	English Proficient	59	8390	45.02	12.07	0.70	0.92	3.36
	Limited English Proficient	59	996	30.87	10.53	0.48	0.87	3.73
10	English Proficient	36	8115	24.64	7.59	0.62	0.86	2.81
	Limited English Proficient	36	865	16.53	5.97	0.41	0.78	2.82

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–4. Mathematics Reliability by Migrant Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Non-Migrant	59	9125	44.07	12.72	0.69	0.93	3.25
	Migrant	59	609	39.07	13.59	0.61	0.94	3.40
4	Non-Migrant	59	9130	43.93	12.53	0.69	0.93	3.34
	Migrant	59	607	40.08	12.75	0.63	0.92	3.49
5	Non-Migrant	59	8976	44.76	12.98	0.70	0.93	3.36
	Migrant	59	649	41.10	12.91	0.64	0.93	3.53
6	Non-Migrant	59	8690	45.00	12.32	0.70	0.93	3.28
	Migrant	59	632	40.58	12.69	0.63	0.93	3.47
7	Non-Migrant	59	8756	44.42	12.67	0.69	0.93	3.33
	Migrant	59	603	40.32	12.62	0.63	0.92	3.50
8	Non-Migrant	59	8626	43.36	12.46	0.68	0.93	3.35
	Migrant	59	656	39.21	12.72	0.61	0.93	3.47
9	Non-Migrant	59	8791	43.76	12.67	0.68	0.93	3.40
	Migrant	59	595	39.92	12.44	0.62	0.92	3.56
10	Non-Migrant	36	8446	23.98	7.84	0.60	0.87	2.82
	Migrant	36	534	21.96	7.36	0.55	0.85	2.84

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–5. Mathematics Reliability by Special Education Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Regular Education	59	8325	45.23	12.12	0.71	0.93	3.21
	Individualized Education Plan	59	1409	35.02	13.46	0.55	0.93	3.52
4	Regular Education	59	8305	45.40	11.74	0.71	0.92	3.29
	Individualized Education Plan	59	1432	33.75	12.71	0.53	0.92	3.61
5	Regular Education	59	8170	46.56	11.88	0.73	0.92	3.28
	Individualized Education Plan	59	1455	33.02	13.10	0.52	0.92	3.68
6	Regular Education	59	8045	46.64	11.28	0.73	0.92	3.22
	Individualized Education Plan	59	1277	32.48	12.14	0.51	0.91	3.67
7	Regular Education	59	8210	45.99	11.70	0.72	0.92	3.27
	Individualized Education Plan	59	1149	31.06	11.91	0.49	0.90	3.73
8	Regular Education	59	8191	44.84	11.58	0.70	0.92	3.30
	Individualized Education Plan	59	1091	29.77	11.28	0.47	0.89	3.68
9	Regular Education	59	8377	45.09	11.91	0.70	0.92	3.35
	Individualized Education Plan	59	1009	30.44	11.32	0.48	0.89	3.74
10	Regular Education	36	8093	24.75	7.45	0.62	0.86	2.81
	Individualized Education Plan	36	887	15.78	6.43	0.39	0.81	2.77

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–6. Mathematics Reliability by Gender**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Female	59	4689	44.17	12.56	0.69	0.93	3.24
	Male	59	5045	43.37	13.07	0.68	0.94	3.28
4	Female	59	4743	44.17	12.16	0.69	0.93	3.32
	Male	59	4994	43.24	12.95	0.68	0.93	3.38
5	Female	59	4651	45.13	12.60	0.71	0.93	3.34
	Male	59	4974	43.94	13.36	0.69	0.94	3.39
6	Female	59	4584	45.16	12.01	0.71	0.93	3.27
	Male	59	4738	44.25	12.74	0.69	0.93	3.31
7	Female	59	4539	44.86	12.13	0.70	0.93	3.31
	Male	59	4820	43.50	13.20	0.68	0.93	3.37
8	Female	59	4530	43.11	12.20	0.67	0.92	3.35
	Male	59	4752	43.03	12.82	0.67	0.93	3.35
9	Female	59	4535	43.73	12.35	0.68	0.92	3.42
	Male	59	4851	43.32	12.99	0.68	0.93	3.41
10	Female	36	4400	23.73	7.68	0.59	0.86	2.85
	Male	36	4580	23.98	7.96	0.60	0.88	2.79

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

## READING

**Table 24–7. Reading Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	White (Caucasian)	55	4938	41.06	12.11	0.68	0.93	3.15
	African American	55	351	33.53	12.16	0.56	0.92	3.41
	Hispanic	55	584	36.90	12.62	0.61	0.93	3.29
	Asian/Pac. Islander/Native Hawaiian	55	788	33.66	12.33	0.56	0.92	3.38
	Alaska Native and American Indian	55	2295	29.02	12.64	0.48	0.93	3.42
	Two or more races	55	750	37.99	12.02	0.63	0.93	3.29
4	White (Caucasian)	55	4961	42.52	11.53	0.71	0.93	3.04
	African American	55	375	34.59	12.86	0.58	0.93	3.36
	Hispanic	55	630	37.02	12.59	0.62	0.93	3.28
	Asian/Pac. Islander/Native Hawaiian	55	741	35.91	13.00	0.60	0.93	3.32
	Alaska Native and American Indian	55	2289	30.89	12.82	0.51	0.93	3.43
	Two or more races	55	733	38.74	12.70	0.65	0.94	3.19
5	White (Caucasian)	55	4973	42.62	11.57	0.71	0.93	3.17
	African American	55	360	35.76	11.86	0.60	0.92	3.39
	Hispanic	55	649	37.42	12.70	0.62	0.93	3.32
	Asian/Pac. Islander/Native Hawaiian	55	775	36.19	12.10	0.60	0.92	3.40
	Alaska Native and American Indian	55	2190	30.74	12.54	0.51	0.93	3.43
	Two or more races	55	672	38.59	12.47	0.64	0.93	3.30
6	White (Caucasian)	55	4868	44.88	10.27	0.75	0.91	3.00
	African American	55	354	37.17	11.92	0.62	0.92	3.37
	Hispanic	55	568	40.29	11.68	0.67	0.92	3.21
	Asian/Pac. Islander/Native Hawaiian	55	718	37.69	12.04	0.63	0.92	3.35
	Alaska Native and American Indian	55	2202	33.50	12.38	0.56	0.92	3.45
	Two or more races	55	593	41.43	11.18	0.69	0.92	3.18
7	White (Caucasian)	55	5036	43.46	10.17	0.72	0.91	3.12
	African American	55	342	35.86	11.42	0.60	0.91	3.41
	Hispanic	55	528	37.95	11.43	0.63	0.91	3.35
	Asian/Pac. Islander/Native Hawaiian	55	777	38.09	11.48	0.63	0.92	3.34
	Alaska Native and American Indian	55	2087	32.26	11.93	0.54	0.92	3.46
	Two or more races	55	597	39.33	11.18	0.66	0.91	3.29
8	White (Caucasian)	55	5007	41.24	9.56	0.69	0.90	3.09
	African American	55	289	34.90	10.18	0.58	0.89	3.34
	Hispanic	55	544	37.05	9.85	0.62	0.89	3.29
	Asian/Pac. Islander/Native Hawaiian	55	741	36.29	10.78	0.60	0.91	3.32
	Alaska Native and American Indian	55	2112	32.42	10.98	0.54	0.91	3.37
	Two or more races	55	596	37.43	10.60	0.62	0.91	3.23

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–7(continued). Reading Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
9	White (Caucasian)	55	5174	43.65	10.03	0.73	0.91	3.01
	African American	55	351	36.32	10.67	0.61	0.90	3.37
	Hispanic	55	524	38.41	11.34	0.64	0.92	3.28
	Asian/Pac. Islander/Native Hawaiian	55	763	37.16	11.71	0.62	0.92	3.35
	Alaska Native and American Indian	55	2105	33.67	11.50	0.56	0.91	3.41
	Two or more races	55	515	41.28	10.69	0.69	0.91	3.17
10	White (Caucasian)	67	5005	57.20	10.23	0.79	0.89	3.36
	African American	67	315	47.49	12.85	0.66	0.91	3.79
	Hispanic	67	459	51.90	11.78	0.72	0.90	3.66
	Asian/Pac. Islander/Native Hawaiian	67	759	49.18	12.51	0.68	0.91	3.74
	Alaska Native and American Indian	67	1962	46.42	13.42	0.64	0.92	3.82
	Two or more races	67	476	52.76	12.18	0.73	0.91	3.60

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–8. Reading Reliability by Socioeconomic Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Not Low Income	55	4982	41.06	12.12	0.68	0.93	3.15
	Low Income	55	4724	32.42	12.94	0.54	0.93	3.38
4	Not Low Income	55	5181	42.19	11.73	0.70	0.93	3.06
	Low Income	55	4548	33.95	13.16	0.57	0.93	3.36
5	Not Low Income	55	5078	42.48	11.64	0.71	0.93	3.17
	Low Income	55	4541	34.06	12.85	0.57	0.93	3.39
6	Not Low Income	55	4997	44.58	10.51	0.74	0.92	3.01
	Low Income	55	4306	36.50	12.42	0.61	0.93	3.36
7	Not Low Income	55	5317	43.07	10.53	0.72	0.91	3.13
	Low Income	55	4050	35.20	11.88	0.59	0.92	3.42
8	Not Low Income	55	5416	40.95	9.70	0.68	0.90	3.11
	Low Income	55	3873	34.25	10.90	0.57	0.91	3.34
9	Not Low Income	55	5693	43.29	10.16	0.72	0.91	3.05
	Low Income	55	3739	35.51	11.68	0.59	0.92	3.36
10	Not Low Income	67	5699	56.27	10.77	0.78	0.90	3.41
	Low Income	67	3277	48.19	13.30	0.67	0.92	3.77

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–9. Reading Reliability by English Proficiency Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	English Proficient	55	8326	38.87	12.56	0.65	0.93	3.23
	Limited English Proficient	55	1380	24.68	10.49	0.41	0.89	3.46
4	English Proficient	55	8588	40.37	12.08	0.67	0.93	3.15
	Limited English Proficient	55	1141	23.04	9.78	0.38	0.87	3.51
5	English Proficient	55	8719	40.17	12.15	0.67	0.93	3.26
	Limited English Proficient	55	900	22.41	8.39	0.37	0.83	3.47
6	English Proficient	55	8413	42.54	11.10	0.71	0.92	3.13
	Limited English Proficient	55	890	24.77	9.28	0.41	0.85	3.60
7	English Proficient	55	8478	41.29	10.84	0.69	0.91	3.22
	Limited English Proficient	55	889	24.20	9.03	0.40	0.85	3.53
8	English Proficient	55	8419	39.50	10.03	0.66	0.90	3.17
	Limited English Proficient	55	870	25.11	8.42	0.42	0.82	3.52
9	English Proficient	55	8429	41.94	10.45	0.70	0.91	3.12
	Limited English Proficient	55	1003	25.58	8.59	0.43	0.83	3.55
10	English Proficient	67	8119	55.03	11.22	0.76	0.90	3.49
	Limited English Proficient	67	857	37.10	11.05	0.52	0.87	4.04

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–10. Reading Reliability by Migrant Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Non-Migrant	55	9098	37.21	13.19	0.62	0.94	3.27
	Migrant	55	608	31.45	12.94	0.52	0.93	3.40
4	Non-Migrant	55	9120	38.70	13.01	0.64	0.94	3.20
	Migrant	55	609	32.88	13.02	0.55	0.93	3.37
5	Non-Migrant	55	8970	38.90	12.86	0.65	0.93	3.28
	Migrant	55	649	33.13	12.67	0.55	0.93	3.40
6	Non-Migrant	55	8671	41.28	11.96	0.69	0.93	3.17
	Migrant	55	632	34.73	12.63	0.58	0.93	3.40
7	Non-Migrant	55	8760	40.08	11.67	0.67	0.92	3.25
	Migrant	55	607	33.72	12.03	0.56	0.92	3.44
8	Non-Migrant	55	8631	38.51	10.61	0.64	0.91	3.20
	Migrant	55	658	33.46	11.27	0.56	0.91	3.34
9	Non-Migrant	55	8834	40.54	11.35	0.68	0.92	3.16
	Migrant	55	598	35.26	11.61	0.59	0.92	3.37
10	Non-Migrant	67	8438	53.57	12.31	0.74	0.92	3.54
	Migrant	67	538	49.47	12.82	0.69	0.92	3.74

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–11. Reading Reliability by Special Education Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Regular Education	55	8316	38.79	12.35	0.65	0.93	3.25
	Individualized Education Plan	55	1390	25.27	12.56	0.42	0.93	3.40
4	Regular Education	55	8300	40.41	12.02	0.67	0.93	3.16
	Individualized Education Plan	55	1429	26.27	12.44	0.44	0.92	3.45
5	Regular Education	55	8168	40.69	11.82	0.68	0.92	3.25
	Individualized Education Plan	55	1451	26.19	11.93	0.44	0.92	3.41
6	Regular Education	55	8029	42.87	10.93	0.71	0.92	3.11
	Individualized Education Plan	55	1274	28.04	11.43	0.47	0.90	3.52
7	Regular Education	55	8215	41.40	10.80	0.69	0.91	3.21
	Individualized Education Plan	55	1152	27.31	11.20	0.46	0.90	3.53
8	Regular Education	55	8202	39.79	9.76	0.66	0.89	3.17
	Individualized Education Plan	55	1087	25.87	9.76	0.43	0.88	3.45
9	Regular Education	55	8422	41.66	10.65	0.69	0.91	3.13
	Individualized Education Plan	55	1010	28.06	10.56	0.47	0.89	3.47
10	Regular Education	67	8096	54.95	11.00	0.76	0.90	3.50
	Individualized Education Plan	67	880	38.30	14.13	0.53	0.92	3.92

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–12. Reading Reliability by Gender**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Female	55	4679	38.43	12.85	0.64	0.94	3.25
	Male	55	5027	35.38	13.45	0.59	0.94	3.30
4	Female	55	4741	39.58	12.54	0.66	0.94	3.18
	Male	55	4988	37.15	13.47	0.62	0.94	3.23
5	Female	55	4652	40.14	12.47	0.67	0.93	3.26
	Male	55	4967	36.98	13.16	0.62	0.94	3.31
6	Female	55	4572	42.22	11.53	0.70	0.93	3.14
	Male	55	4731	39.50	12.52	0.66	0.93	3.22
7	Female	55	4552	41.28	11.05	0.69	0.92	3.22
	Male	55	4815	38.14	12.27	0.64	0.93	3.30
8	Female	55	4538	39.63	10.22	0.66	0.90	3.17
	Male	55	4751	36.75	11.03	0.61	0.91	3.24
9	Female	55	4567	41.84	10.89	0.70	0.92	3.12
	Male	55	4865	38.66	11.73	0.64	0.92	3.22
10	Female	67	4392	54.57	11.44	0.76	0.91	3.50
	Male	67	4584	52.12	13.10	0.72	0.93	3.58

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

## WRITING

**Table 24–13. Writing Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	White (Caucasian)	52	4938	42.15	12.32	0.70	0.93	3.16
	African American	52	352	34.84	13.04	0.58	0.93	3.39
	Hispanic	52	584	38.36	12.84	0.64	0.93	3.30
	Asian/Pac. Islander/Native Hawaiian	52	787	36.93	12.94	0.62	0.93	3.36
	Alaska Native and American Indian	52	2298	29.86	13.57	0.50	0.93	3.47
	Two or more races	52	749	39.45	12.63	0.66	0.93	3.28
4	White (Caucasian)	50	4956	42.07	10.63	0.70	0.91	3.22
	African American	50	376	36.01	11.29	0.60	0.91	3.42
	Hispanic	50	631	38.24	11.08	0.64	0.91	3.35
	Asian/Pac. Islander/Native Hawaiian	50	743	37.97	11.63	0.63	0.92	3.37
	Alaska Native and American Indian	50	2295	31.73	11.82	0.53	0.91	3.52
	Two or more races	50	734	38.72	11.67	0.65	0.92	3.35
5	White (Caucasian)	50	4966	42.04	10.58	0.70	0.91	3.25
	African American	50	360	37.44	11.15	0.62	0.90	3.46
	Hispanic	50	648	38.84	11.24	0.65	0.91	3.41
	Asian/Pac. Islander/Native Hawaiian	50	776	39.05	11.04	0.65	0.91	3.34
	Alaska Native and American Indian	50	2187	32.16	11.76	0.54	0.91	3.55
	Two or more races	50	671	39.26	11.16	0.65	0.91	3.38
6	White (Caucasian)	50	4857	42.86	10.06	0.71	0.90	3.17
	African American	50	353	35.69	11.74	0.59	0.92	3.41
	Hispanic	50	568	39.00	10.98	0.65	0.91	3.30
	Asian/Pac. Islander/Native Hawaiian	50	721	37.18	11.42	0.62	0.91	3.38
	Alaska Native and American Indian	50	2203	31.79	11.66	0.53	0.91	3.51
	Two or more races	50	592	39.75	10.59	0.66	0.90	3.30
7	White (Caucasian)	50	5022	40.94	10.42	0.68	0.90	3.32
	African American	50	341	33.36	11.28	0.56	0.90	3.54
	Hispanic	50	528	36.48	11.13	0.61	0.90	3.43
	Asian/Pac. Islander/Native Hawaiian	50	778	37.77	11.28	0.63	0.91	3.40
	Alaska Native and American Indian	50	2081	30.80	11.11	0.51	0.90	3.53
	Two or more races	50	597	37.55	11.25	0.63	0.91	3.44
8	White (Caucasian)	50	4998	41.41	10.26	0.69	0.90	3.17
	African American	50	288	35.35	10.96	0.59	0.91	3.35
	Hispanic	50	544	37.35	10.55	0.62	0.90	3.29
	Asian/Pac. Islander/Native Hawaiian	50	739	37.67	11.40	0.63	0.92	3.30
	Alaska Native and American Indian	50	2104	31.85	11.28	0.53	0.91	3.43
	Two or more races	50	592	37.97	11.60	0.63	0.92	3.26

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–13 (continued). Writing Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
9	White (Caucasian)	50	5161	41.87	10.35	0.70	0.90	3.24
	African American	50	352	34.60	10.75	0.58	0.90	3.48
	Hispanic	50	520	36.92	11.41	0.62	0.91	3.41
	Asian/Pac. Islander/Native Hawaiian	50	758	37.04	11.50	0.62	0.91	3.43
	Alaska Native and American Indian	50	2094	32.90	11.11	0.55	0.90	3.52
	Two or more races	50	516	39.56	10.94	0.66	0.91	3.37
10	White (Caucasian)	34	5014	36.21	6.80	0.72	0.83	2.81
	African American	34	318	31.11	8.01	0.62	0.85	3.10
	Hispanic	34	458	33.56	7.54	0.67	0.84	2.98
	Asian/Pac. Islander/Native Hawaiian	34	767	33.32	7.52	0.67	0.85	2.90
	Alaska Native and American Indian	34	1955	30.52	8.19	0.61	0.86	3.11
	Two or more races	34	474	33.81	7.98	0.68	0.86	2.98

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–14. Writing Reliability by Socioeconomic Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Not Low Income	52	4978	42.30	12.33	0.71	0.93	3.15
	Low Income	52	4730	33.71	13.70	0.56	0.94	3.41
4	Not Low Income	50	5178	41.92	10.94	0.70	0.91	3.22
	Low Income	50	4557	34.79	11.81	0.58	0.91	3.47
5	Not Low Income	50	5072	42.33	10.52	0.71	0.91	3.24
	Low Income	50	4536	35.22	11.79	0.59	0.91	3.49
6	Not Low Income	50	4991	42.76	10.26	0.71	0.91	3.16
	Low Income	50	4303	34.82	11.72	0.58	0.91	3.44
7	Not Low Income	50	5310	40.85	10.68	0.68	0.90	3.31
	Low Income	50	4037	33.50	11.29	0.56	0.90	3.52
8	Not Low Income	50	5398	41.40	10.39	0.69	0.91	3.16
	Low Income	50	3867	33.96	11.31	0.57	0.91	3.39
9	Not Low Income	50	5684	41.72	10.34	0.70	0.90	3.25
	Low Income	50	3717	34.36	11.41	0.57	0.91	3.49
10	Not Low Income	34	5702	35.99	6.91	0.72	0.83	2.83
	Low Income	34	3284	31.31	8.11	0.63	0.86	3.07

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–15. Writing Reliability by English Proficiency Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	English Proficient	52	8325	40.02	13.02	0.67	0.94	3.24
	Limited English Proficient	52	1383	26.65	12.04	0.44	0.91	3.53
4	English Proficient	50	8590	40.24	11.15	0.67	0.91	3.30
	Limited English Proficient	50	1145	26.17	9.78	0.44	0.86	3.61
5	English Proficient	50	8706	40.32	11.06	0.67	0.91	3.33
	Limited English Proficient	50	902	25.96	9.32	0.43	0.85	3.63
6	English Proficient	50	8401	40.64	10.82	0.68	0.91	3.26
	Limited English Proficient	50	893	24.48	8.70	0.41	0.83	3.55
7	English Proficient	50	8463	39.02	10.96	0.65	0.90	3.38
	Limited English Proficient	50	884	24.84	8.68	0.41	0.83	3.55
8	English Proficient	50	8400	39.65	10.79	0.66	0.91	3.23
	Limited English Proficient	50	865	25.16	8.34	0.42	0.82	3.52
9	English Proficient	50	8411	40.28	10.71	0.67	0.90	3.31
	Limited English Proficient	50	990	26.29	8.65	0.44	0.82	3.63
10	English Proficient	34	8121	35.15	7.25	0.70	0.84	2.89
	Limited English Proficient	34	865	26.17	7.09	0.52	0.81	3.13

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–16. Writing Reliability by Migrant Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Non-Migrant	52	9097	38.49	13.60	0.64	0.94	3.27
	Migrant	52	611	32.48	14.00	0.54	0.94	3.43
4	Non-Migrant	50	9127	38.90	11.83	0.65	0.92	3.33
	Migrant	50	608	33.77	11.89	0.56	0.91	3.49
5	Non-Migrant	50	8960	39.29	11.63	0.65	0.92	3.35
	Migrant	50	648	34.57	11.64	0.58	0.91	3.51
6	Non-Migrant	50	8663	39.50	11.55	0.66	0.92	3.29
	Migrant	50	631	33.42	11.58	0.56	0.91	3.47
7	Non-Migrant	50	8743	38.02	11.49	0.63	0.91	3.40
	Migrant	50	604	32.67	11.03	0.54	0.90	3.54
8	Non-Migrant	50	8609	38.67	11.29	0.64	0.92	3.26
	Migrant	50	656	33.39	11.56	0.56	0.91	3.40
9	Non-Migrant	50	8809	39.09	11.33	0.65	0.91	3.35
	Migrant	50	592	34.65	10.94	0.58	0.90	3.48
10	Non-Migrant	34	8456	34.40	7.69	0.69	0.86	2.92
	Migrant	34	530	32.36	7.67	0.65	0.85	3.00

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–17. Writing Reliability by Special Education Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Regular Education	52	8308	39.72	13.16	0.66	0.94	3.25
	Individualized Education Plan	52	1400	28.58	12.94	0.48	0.93	3.47
4	Regular Education	50	8298	40.20	11.28	0.67	0.91	3.29
	Individualized Education Plan	50	1437	29.24	11.05	0.49	0.90	3.54
5	Regular Education	50	8154	40.81	10.81	0.68	0.91	3.31
	Individualized Education Plan	50	1454	28.64	11.03	0.48	0.90	3.57
6	Regular Education	50	8018	40.89	10.80	0.68	0.91	3.24
	Individualized Education Plan	50	1276	27.78	10.38	0.46	0.88	3.53
7	Regular Education	50	8193	39.40	10.67	0.66	0.90	3.37
	Individualized Education Plan	50	1154	25.45	9.97	0.42	0.87	3.54
8	Regular Education	50	8173	40.02	10.47	0.67	0.91	3.22
	Individualized Education Plan	50	1092	25.39	9.62	0.42	0.87	3.46
9	Regular Education	50	8395	40.31	10.59	0.67	0.90	3.31
	Individualized Education Plan	50	1006	26.26	9.62	0.44	0.86	3.58
10	Regular Education	34	8102	35.31	6.96	0.71	0.83	2.88
	Individualized Education Plan	34	884	24.88	7.80	0.50	0.84	3.15

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement

**Table 24–18. Writing Reliability by Gender**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Female	52	4673	40.54	13.31	0.68	0.94	3.21
	Male	52	5035	35.87	13.68	0.60	0.94	3.34
4	Female	50	4732	40.73	11.30	0.68	0.92	3.25
	Male	50	5003	36.56	12.09	0.61	0.92	3.37
5	Female	50	4647	41.17	11.03	0.69	0.91	3.29
	Male	50	4961	36.91	11.91	0.62	0.92	3.39
6	Female	50	4561	41.36	11.10	0.69	0.92	3.20
	Male	50	4733	36.89	11.75	0.61	0.92	3.33
7	Female	50	4542	40.32	10.75	0.67	0.90	3.31
	Male	50	4805	35.18	11.70	0.59	0.91	3.45
8	Female	50	4529	40.86	10.72	0.68	0.91	3.16
	Male	50	4736	35.84	11.48	0.60	0.92	3.32
9	Female	50	4558	41.29	10.53	0.69	0.91	3.24
	Male	50	4843	36.48	11.61	0.61	0.91	3.41
10	Female	34	4414	36.22	6.93	0.72	0.84	2.76
	Male	34	4572	32.41	7.94	0.65	0.86	3.01

L=Number of items, N=Number of persons, Mean=Average person raw score  
SD=Standard deviation of person raw scores, SEM=Standard error of measurement