

## APPENDIX 27: OPERATIONAL TEST RELIABILITY BY SUBPOPULATIONS

### MATHEMATICS

**Table 27–1. Mathematics Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
<b>3</b>	White (Caucasian)	59	4822	45.43	12.24	0.71	0.93	3.24
	African American	59	371	36.64	13.41	0.57	0.93	3.51
	Hispanic	59	596	40.10	13.42	0.63	0.94	3.41
	Asian/Pac. Islander/Native Hawaiian	59	744	39.91	13.51	0.62	0.94	3.40
	Alaska Native and American Indian	59	2133	34.46	13.68	0.54	0.93	3.53
	Two or more races	59	823	41.83	13.28	0.65	0.94	3.36
<b>4</b>	White (Caucasian)	59	4911	44.44	12.89	0.69	0.93	3.39
	African American	59	352	36.35	13.72	0.57	0.93	3.64
	Hispanic	59	584	39.98	13.45	0.62	0.93	3.57
	Asian/Pac. Islander/Native Hawaiian	59	823	39.48	13.38	0.62	0.93	3.55
	Alaska Native and American Indian	59	2221	32.80	13.84	0.51	0.93	3.62
	Two or more races	59	785	41.57	13.43	0.65	0.93	3.50
<b>5</b>	White (Caucasian)	59	4900	45.85	13.09	0.72	0.94	3.27
	African American	59	383	37.26	14.63	0.58	0.94	3.60
	Hispanic	59	630	40.25	13.44	0.63	0.93	3.53
	Asian/Pac. Islander/Native Hawaiian	59	774	42.37	14.38	0.66	0.94	3.39
	Alaska Native and American Indian	59	2200	34.32	14.35	0.54	0.94	3.63
	Two or more races	59	791	42.63	14.27	0.67	0.94	3.39
<b>6</b>	White (Caucasian)	59	4952	45.61	12.85	0.71	0.93	3.29
	African American	59	359	38.47	14.29	0.60	0.94	3.53
	Hispanic	59	640	41.74	13.52	0.65	0.94	3.43
	Asian/Pac. Islander/Native Hawaiian	59	814	41.19	13.83	0.64	0.94	3.44
	Alaska Native and American Indian	59	2161	35.19	13.82	0.55	0.93	3.59
	Two or more races	59	692	42.14	14.00	0.66	0.94	3.41
<b>7</b>	White (Caucasian)	59	4879	43.87	12.66	0.69	0.93	3.33
	African American	59	335	34.59	13.40	0.54	0.93	3.58
	Hispanic	59	570	38.93	13.67	0.61	0.94	3.48
	Asian/Pac. Islander/Native Hawaiian	59	766	39.76	13.79	0.62	0.94	3.45
	Alaska Native and American Indian	59	2118	34.08	13.45	0.53	0.93	3.58
	Two or more races	59	618	40.77	13.03	0.64	0.93	3.44
<b>8</b>	White (Caucasian)	59	4948	45.30	12.49	0.71	0.93	3.33
	African American	59	355	34.52	13.44	0.54	0.93	3.63
	Hispanic	59	533	38.85	13.74	0.61	0.93	3.55
	Asian/Pac. Islander/Native Hawaiian	59	808	42.34	13.89	0.66	0.94	3.40
	Alaska Native and American Indian	59	1978	34.99	13.63	0.55	0.93	3.61
	Two or more races	59	615	40.73	14.15	0.64	0.94	3.46

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 27–1 (continued). Mathematics Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
9	White (Caucasian)	59	4930	44.94	13.01	0.70	0.93	3.46
	African American	59	310	33.85	13.55	0.53	0.92	3.82
	Hispanic	59	568	38.79	13.78	0.61	0.93	3.71
	Asian/Pac. Islander/Native Hawaiian	59	755	41.01	14.30	0.64	0.94	3.60
	Alaska Native and American Indian	59	2139	34.81	13.80	0.54	0.93	3.75
	Two or more races	59	588	40.78	14.14	0.64	0.94	3.60
10	White (Caucasian)	36	4834	26.71	8.41	0.67	0.88	2.88
	African American	36	325	19.61	8.45	0.49	0.88	2.97
	Hispanic	36	505	22.19	8.82	0.55	0.88	2.99
	Asian/Pac. Islander/Native Hawaiian	36	764	23.75	9.10	0.59	0.89	2.97
	Alaska Native and American Indian	36	1785	20.81	8.30	0.52	0.87	2.96
	Two or more races	36	487	25.18	8.41	0.63	0.88	2.94

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 27–2. Mathematics Reliability by Socioeconomic Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Not Low Income	59	4991	45.11	12.62	0.70	0.93	3.23
	Low Income	59	4498	37.58	13.65	0.59	0.93	3.48
4	Not Low Income	59	5108	44.08	13.27	0.69	0.93	3.40
	Low Income	59	4568	36.61	13.91	0.57	0.93	3.61
5	Not Low Income	59	5234	45.34	13.57	0.71	0.94	3.27
	Low Income	59	4444	38.03	14.47	0.59	0.94	3.57
6	Not Low Income	59	5239	45.75	13.03	0.71	0.94	3.27
	Low Income	59	4379	37.78	13.85	0.59	0.93	3.56
7	Not Low Income	59	5158	43.96	12.86	0.69	0.93	3.32
	Low Income	59	4128	36.06	13.40	0.56	0.93	3.56
8	Not Low Income	59	5366	45.11	12.84	0.70	0.93	3.33
	Low Income	59	3871	37.08	13.74	0.58	0.93	3.58
9	Not Low Income	59	5549	44.50	13.29	0.70	0.93	3.47
	Low Income	59	3741	36.50	13.98	0.57	0.93	3.73
10	Not Low Income	36	5462	26.62	8.40	0.67	0.88	2.89
	Low Income	36	3238	21.28	8.62	0.53	0.88	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 27–3. Mathematics Reliability by English Proficiency Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	English Proficient	59	8235	43.47	12.90	0.68	0.93	3.31
	Limited English Proficient	59	1254	28.86	11.49	0.45	0.90	3.62
4	English Proficient	59	8415	42.50	13.35	0.66	0.93	3.47
	Limited English Proficient	59	1261	27.57	11.74	0.43	0.90	3.64
5	English Proficient	59	8637	43.77	13.68	0.68	0.94	3.36
	Limited English Proficient	59	1041	27.15	12.01	0.42	0.90	3.74
6	English Proficient	59	8744	43.65	13.33	0.68	0.94	3.37
	Limited English Proficient	59	874	26.87	10.90	0.42	0.89	3.67
7	English Proficient	59	8395	41.94	13.05	0.66	0.93	3.40
	Limited English Proficient	59	891	26.47	11.36	0.41	0.90	3.64
8	English Proficient	59	8373	43.20	13.20	0.67	0.93	3.41
	Limited English Proficient	59	864	27.64	11.37	0.43	0.89	3.69
9	English Proficient	59	8379	42.85	13.51	0.67	0.93	3.55
	Limited English Proficient	59	911	26.85	11.20	0.42	0.88	3.83
10	English Proficient	36	7863	25.51	8.59	0.64	0.88	2.92
	Limited English Proficient	36	837	16.35	6.91	0.41	0.82	2.91

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 27–4. Mathematics Reliability by Migrant Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Non-Migrant	59	8933	41.75	13.60	0.65	0.94	3.35
	Migrant	59	556	38.13	14.02	0.60	0.94	3.45
4	Non-Migrant	59	9034	40.86	14.01	0.64	0.94	3.50
	Migrant	59	642	36.17	14.26	0.57	0.94	3.59
5	Non-Migrant	59	9029	42.28	14.37	0.66	0.94	3.41
	Migrant	59	649	37.87	15.03	0.59	0.94	3.54
6	Non-Migrant	59	8937	42.37	13.97	0.66	0.94	3.40
	Migrant	59	681	38.84	13.71	0.61	0.93	3.51
7	Non-Migrant	59	8623	40.77	13.66	0.64	0.94	3.42
	Migrant	59	663	36.32	13.23	0.57	0.93	3.55
8	Non-Migrant	59	8599	42.01	13.81	0.66	0.94	3.43
	Migrant	59	638	38.22	13.27	0.60	0.93	3.56
9	Non-Migrant	59	8623	41.56	14.07	0.65	0.94	3.58
	Migrant	59	667	37.64	14.34	0.59	0.93	3.67
10	Non-Migrant	36	8154	24.79	8.86	0.62	0.89	2.93
	Migrant	36	546	22.22	8.59	0.56	0.88	2.97

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 27–5. Mathematics Reliability by Special Education Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Regular Education	59	8120	42.99	13.08	0.67	0.94	3.32
	Individualized Education Plan	59	1369	32.92	13.79	0.51	0.93	3.56
4	Regular Education	59	8269	42.40	13.29	0.66	0.93	3.47
	Individualized Education Plan	59	1407	29.69	13.64	0.46	0.93	3.66
5	Regular Education	59	8268	44.09	13.57	0.69	0.94	3.34
	Individualized Education Plan	59	1410	29.62	13.23	0.46	0.92	3.75
6	Regular Education	59	8249	44.30	12.96	0.69	0.93	3.35
	Individualized Education Plan	59	1369	29.01	12.71	0.45	0.92	3.69
7	Regular Education	59	8064	42.53	12.73	0.66	0.93	3.39
	Individualized Education Plan	59	1222	26.76	11.67	0.42	0.90	3.67
8	Regular Education	59	8156	43.65	12.81	0.68	0.93	3.39
	Individualized Education Plan	59	1081	27.35	12.47	0.43	0.91	3.68
9	Regular Education	59	8212	43.18	13.25	0.67	0.93	3.54
	Individualized Education Plan	59	1078	26.79	12.08	0.42	0.90	3.80
10	Regular Education	36	7813	25.65	8.44	0.64	0.88	2.92
	Individualized Education Plan	36	887	15.60	7.19	0.39	0.84	2.92

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 27–6. Mathematics Reliability by Gender**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Female	59	4636	41.79	13.50	0.65	0.94	3.36
	Male	59	4853	41.30	13.79	0.65	0.94	3.36
4	Female	59	4673	40.80	13.73	0.64	0.93	3.52
	Male	59	5003	40.32	14.39	0.63	0.94	3.50
5	Female	59	4711	42.53	14.14	0.66	0.94	3.40
	Male	59	4967	41.47	14.73	0.65	0.95	3.43
6	Female	59	4624	42.86	13.53	0.67	0.94	3.38
	Male	59	4994	41.44	14.35	0.65	0.94	3.43
7	Female	59	4574	41.10	13.20	0.64	0.93	3.42
	Male	59	4712	39.82	14.10	0.62	0.94	3.44
8	Female	59	4495	42.00	13.58	0.66	0.94	3.43
	Male	59	4742	41.50	14.01	0.65	0.94	3.43
9	Female	59	4514	41.55	13.82	0.65	0.93	3.58
	Male	59	4776	41.02	14.41	0.64	0.94	3.57
10	Female	36	4231	24.74	8.59	0.62	0.88	2.96
	Male	36	4469	24.52	9.11	0.61	0.90	2.91

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 27–7. Reading Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean		
						p-value	Reliability	SEM
3	White (Caucasian)	55	4817	42.86	12.37	0.71	0.93	3.27
	African American	55	370	35.78	12.92	0.60	0.92	3.59
	Hispanic	55	591	37.88	13.13	0.63	0.93	3.50
	Asian/Pac. Islander/Native Hawaiian	55	734	37.22	12.59	0.62	0.92	3.51
	Alaska Native and American Indian	55	2152	30.15	13.05	0.50	0.92	3.62
	Two or more races	55	820	39.24	13.48	0.65	0.94	3.41
4	White (Caucasian)	55	4912	43.03	12.47	0.72	0.93	3.19
	African American	55	352	33.69	13.54	0.56	0.93	3.53
	Hispanic	55	579	37.97	13.64	0.63	0.94	3.40
	Asian/Pac. Islander/Native Hawaiian	55	809	34.12	14.07	0.57	0.94	3.51
	Alaska Native and American Indian	55	2220	28.77	13.71	0.48	0.93	3.56
	Two or more races	55	783	38.92	13.14	0.65	0.93	3.39
5	White (Caucasian)	55	4902	41.56	11.68	0.69	0.93	3.17
	African American	55	382	33.58	12.30	0.56	0.92	3.42
	Hispanic	55	625	36.10	12.11	0.60	0.92	3.37
	Asian/Pac. Islander/Native Hawaiian	55	765	34.86	12.58	0.58	0.93	3.40
	Alaska Native and American Indian	55	2210	28.59	12.73	0.48	0.93	3.45
	Two or more races	55	792	37.48	12.72	0.62	0.93	3.29
6	White (Caucasian)	55	4971	43.80	10.63	0.73	0.92	3.02
	African American	55	361	35.73	11.85	0.60	0.92	3.34
	Hispanic	55	637	39.35	11.61	0.66	0.92	3.22
	Asian/Pac. Islander/Native Hawaiian	55	803	36.07	11.99	0.60	0.92	3.34
	Alaska Native and American Indian	55	2163	31.22	12.38	0.52	0.92	3.39
	Two or more races	55	697	39.91	11.90	0.67	0.93	3.19
7	White (Caucasian)	55	4892	44.00	11.47	0.73	0.93	3.14
	African American	55	336	35.99	12.43	0.60	0.92	3.44
	Hispanic	55	566	39.10	12.35	0.65	0.93	3.36
	Asian/Pac. Islander/Native Hawaiian	55	762	36.53	12.40	0.61	0.92	3.44
	Alaska Native and American Indian	55	2126	31.18	12.97	0.52	0.93	3.48
	Two or more races	55	618	39.70	12.29	0.66	0.93	3.33
8	White (Caucasian)	55	4964	42.57	10.87	0.71	0.92	3.11
	African American	55	353	33.18	11.74	0.55	0.91	3.43
	Hispanic	55	534	36.13	11.87	0.60	0.92	3.34
	Asian/Pac. Islander/Native Hawaiian	55	806	36.34	11.87	0.61	0.92	3.35
	Alaska Native and American Indian	55	1982	30.77	12.10	0.51	0.92	3.44
	Two or more races	55	612	37.62	12.35	0.63	0.93	3.29

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 27–7(continued). Reading Reliability by Ethnicity**

<b>Grade</b>	<b>Subpopulation Group</b>	<b>L</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Mean p-value</b>	<b>Reliability</b>	<b>SEM</b>
<b>9</b>	White (Caucasian)	55	4943	42.56	11.24	0.71	0.92	3.26
	African American	55	309	32.55	11.42	0.54	0.90	3.58
	Hispanic	55	566	37.14	12.20	0.62	0.92	3.46
	Asian/Pac. Islander/Native Hawaiian	55	752	35.90	12.45	0.60	0.92	3.49
	Alaska Native and American Indian	55	2151	31.11	12.42	0.52	0.92	3.53
	Two or more races	55	586	39.11	11.87	0.65	0.92	3.41
<b>10</b>	White (Caucasian)	66	4856	55.61	10.44	0.77	0.91	3.21
	African American	66	327	46.04	13.07	0.64	0.92	3.65
	Hispanic	66	499	49.13	12.97	0.68	0.93	3.52
	Asian/Pac. Islander/Native Hawaiian	66	766	47.55	12.48	0.66	0.92	3.60
	Alaska Native and American Indian	66	1788	44.65	12.93	0.62	0.92	3.66
	Two or more races	66	495	52.36	11.88	0.73	0.92	3.40

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 27–8. Reading Reliability by Socioeconomic Status**

<b>Grade</b>	<b>Subpopulation Group</b>	<b>L</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Mean p-value</b>	<b>Reliability</b>	<b>SEM</b>
<b>3</b>	Not Low Income	55	4989	42.42	12.80	0.71	0.93	3.28
	Low Income	55	4495	34.45	13.43	0.57	0.93	3.57
<b>4</b>	Not Low Income	55	5109	42.10	13.13	0.70	0.94	3.23
	Low Income	55	4546	33.46	14.23	0.56	0.94	3.50
<b>5</b>	Not Low Income	55	5242	40.64	12.39	0.68	0.93	3.19
	Low Income	55	4434	32.84	12.93	0.55	0.93	3.41
<b>6</b>	Not Low Income	55	5264	43.17	11.30	0.72	0.93	3.04
	Low Income	55	4368	34.98	12.35	0.58	0.93	3.34
<b>7</b>	Not Low Income	55	5165	43.35	11.96	0.72	0.93	3.16
	Low Income	55	4135	34.87	13.03	0.58	0.93	3.44
<b>8</b>	Not Low Income	55	5386	41.80	11.45	0.70	0.93	3.13
	Low Income	55	3865	33.76	12.19	0.56	0.92	3.40
<b>9</b>	Not Low Income	55	5550	41.71	11.71	0.70	0.92	3.29
	Low Income	55	3757	33.75	12.57	0.56	0.92	3.51
<b>10</b>	Not Low Income	66	5488	54.93	10.71	0.76	0.91	3.25
	Low Income	66	3243	46.36	13.23	0.64	0.93	3.62

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 27–9. Reading Reliability by English Proficiency Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	English Proficient	55	8234	40.83	12.83	0.68	0.93	3.37
	Limited English Proficient	55	1250	24.19	9.90	0.40	0.86	3.64
4	English Proficient	55	8416	40.40	13.28	0.67	0.94	3.31
	Limited English Proficient	55	1239	21.90	10.12	0.37	0.88	3.53
5	English Proficient	55	8645	38.98	12.33	0.65	0.93	3.26
	Limited English Proficient	55	1031	21.00	8.75	0.35	0.84	3.47
6	English Proficient	55	8772	41.14	11.48	0.69	0.93	3.14
	Limited English Proficient	55	860	22.22	8.44	0.37	0.83	3.49
7	English Proficient	55	8418	41.36	12.22	0.69	0.93	3.26
	Limited English Proficient	55	882	22.62	8.85	0.38	0.84	3.53
8	English Proficient	55	8398	39.97	11.70	0.67	0.92	3.22
	Limited English Proficient	55	853	23.42	8.65	0.39	0.84	3.50
9	English Proficient	55	8394	40.22	11.86	0.67	0.92	3.36
	Limited English Proficient	55	913	22.66	8.25	0.38	0.81	3.57
10	English Proficient	66	7878	53.57	11.17	0.74	0.91	3.33
	Limited English Proficient	66	853	34.91	10.58	0.48	0.87	3.88

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 27–10. Reading Reliability by Migrant Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Non-Migrant	55	8925	38.91	13.66	0.65	0.94	3.42
	Migrant	55	559	34.27	13.46	0.57	0.93	3.59
4	Non-Migrant	55	9015	38.45	14.24	0.64	0.94	3.36
	Migrant	55	640	32.08	14.15	0.53	0.94	3.54
5	Non-Migrant	55	9023	37.46	13.16	0.62	0.94	3.28
	Migrant	55	653	31.66	12.96	0.53	0.93	3.45
6	Non-Migrant	55	8949	39.84	12.39	0.66	0.93	3.17
	Migrant	55	683	34.46	12.44	0.57	0.93	3.35
7	Non-Migrant	55	8636	40.05	13.02	0.67	0.94	3.29
	Migrant	55	664	33.45	13.22	0.56	0.93	3.46
8	Non-Migrant	55	8611	38.86	12.34	0.65	0.93	3.24
	Migrant	55	640	32.77	12.02	0.55	0.92	3.44
9	Non-Migrant	55	8637	38.85	12.59	0.65	0.93	3.38
	Migrant	55	670	33.99	12.91	0.57	0.93	3.48
10	Non-Migrant	66	8193	52.10	12.29	0.72	0.92	3.39
	Migrant	66	538	46.35	13.10	0.64	0.92	3.61

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 27–11. Reading Reliability by Special Education Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Regular Education	55	8126	40.48	12.84	0.67	0.93	3.40
	Individualized Education Plan	55	1358	27.61	13.47	0.46	0.93	3.60
4	Regular Education	55	8253	40.20	13.30	0.67	0.94	3.32
	Individualized Education Plan	55	1402	25.27	13.45	0.42	0.93	3.50
5	Regular Education	55	8265	39.14	12.32	0.65	0.93	3.26
	Individualized Education Plan	55	1411	24.90	11.71	0.42	0.91	3.45
6	Regular Education	55	8267	41.52	11.33	0.69	0.92	3.12
	Individualized Education Plan	55	1365	26.95	11.73	0.45	0.91	3.45
7	Regular Education	55	8074	41.64	12.11	0.69	0.93	3.24
	Individualized Education Plan	55	1226	25.99	11.49	0.43	0.91	3.50
8	Regular Education	55	8172	40.19	11.53	0.67	0.92	3.21
	Individualized Education Plan	55	1079	25.22	10.80	0.42	0.90	3.48
9	Regular Education	55	8225	40.25	11.83	0.67	0.92	3.35
	Individualized Education Plan	55	1082	25.15	10.79	0.42	0.89	3.52
10	Regular Education	66	7849	53.38	11.22	0.74	0.91	3.34
	Individualized Education Plan	66	882	37.25	13.13	0.52	0.92	3.80

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 27–12. Reading Reliability by Gender**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Female	55	4645	40.20	13.27	0.67	0.93	3.40
	Male	55	4839	37.14	13.93	0.62	0.94	3.47
4	Female	55	4667	39.51	14.00	0.66	0.94	3.34
	Male	55	4988	36.65	14.49	0.61	0.95	3.39
5	Female	55	4718	38.62	12.75	0.64	0.93	3.27
	Male	55	4958	35.59	13.49	0.59	0.94	3.30
6	Female	55	4639	41.01	11.83	0.68	0.93	3.12
	Male	55	4993	38.01	12.88	0.63	0.94	3.22
7	Female	55	4583	41.04	12.58	0.68	0.93	3.26
	Male	55	4717	38.17	13.52	0.64	0.94	3.31
8	Female	55	4509	39.95	11.94	0.67	0.93	3.21
	Male	55	4742	37.01	12.68	0.62	0.93	3.27
9	Female	55	4537	40.32	12.24	0.67	0.93	3.31
	Male	55	4770	36.76	12.85	0.61	0.93	3.42
10	Female	66	4257	53.52	11.72	0.74	0.92	3.32
	Male	66	4474	50.06	12.82	0.70	0.93	3.46

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 27–13. Writing 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)	52	4822	41.18	12.50	0.69	0.93	3.21
	African American	52	371	35.27	12.73	0.59	0.93	3.42
	Hispanic	52	592	36.63	12.90	0.61	0.93	3.38
	Asian/Pac. Islander/Native Hawaiian	52	733	37.35	13.15	0.62	0.93	3.36
	Alaska Native and American Indian	52	2151	29.05	13.55	0.48	0.93	3.48
	Two or more races	52	823	37.61	13.84	0.63	0.94	3.32
4	White (Caucasian)	50	4912	42.09	10.86	0.70	0.91	3.24
	African American	50	352	35.72	11.75	0.60	0.92	3.40
	Hispanic	50	579	38.84	11.23	0.65	0.91	3.36
	Asian/Pac. Islander/Native Hawaiian	50	807	37.27	11.41	0.62	0.91	3.41
	Alaska Native and American Indian	50	2226	30.69	11.96	0.51	0.91	3.51
	Two or more races	50	782	39.27	11.19	0.65	0.91	3.38
5	White (Caucasian)	50	4898	41.67	10.60	0.69	0.89	3.51
	African American	50	382	35.33	11.19	0.59	0.89	3.73
	Hispanic	50	626	37.59	10.81	0.63	0.89	3.66
	Asian/Pac. Islander/Native Hawaiian	50	762	38.06	11.42	0.63	0.90	3.58
	Alaska Native and American Indian	50	2209	31.63	11.51	0.53	0.90	3.72
	Two or more races	50	792	38.10	11.35	0.63	0.90	3.56
6	White (Caucasian)	50	4976	41.79	10.56	0.70	0.89	3.55
	African American	50	360	35.75	11.34	0.60	0.89	3.70
	Hispanic	50	638	38.86	11.06	0.65	0.89	3.66
	Asian/Pac. Islander/Native Hawaiian	50	805	37.76	11.20	0.63	0.89	3.69
	Alaska Native and American Indian	50	2156	31.25	11.57	0.52	0.89	3.78
	Two or more races	50	695	38.51	11.48	0.64	0.90	3.65
7	White (Caucasian)	50	4873	40.56	10.67	0.68	0.89	3.57
	African American	50	336	33.60	11.10	0.56	0.89	3.70
	Hispanic	50	565	37.11	11.08	0.62	0.89	3.69
	Asian/Pac. Islander/Native Hawaiian	50	760	35.42	11.26	0.59	0.89	3.81
	Alaska Native and American Indian	50	2125	29.86	11.27	0.50	0.89	3.76
	Two or more races	50	620	36.78	11.12	0.61	0.89	3.69
8	White (Caucasian)	50	4958	42.47	9.70	0.71	0.86	3.61
	African American	50	356	34.63	10.80	0.58	0.88	3.72
	Hispanic	50	534	37.22	11.07	0.62	0.89	3.68
	Asian/Pac. Islander/Native Hawaiian	50	803	38.61	10.69	0.64	0.88	3.76
	Alaska Native and American Indian	50	1981	32.15	10.99	0.54	0.88	3.73
	Two or more races	50	610	38.12	10.99	0.64	0.89	3.68

*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 27–13 (continued). Writing Reliability by Ethnicity**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
9	White (Caucasian)	50	4936	42.24	10.55	0.70	0.86	3.90
	African American	50	307	34.07	11.21	0.57	0.88	3.93
	Hispanic	50	564	37.34	11.01	0.62	0.87	3.96
	Asian/Pac. Islander/Native Hawaiian	50	754	37.03	11.47	0.62	0.88	4.03
	Alaska Native and American Indian	50	2147	32.08	11.25	0.53	0.87	3.99
	Two or more races	50	587	38.65	11.53	0.64	0.88	3.92
10	White (Caucasian)	34	4870	33.70	7.84	0.67	0.86	2.92
	African American	34	323	27.76	8.52	0.56	0.87	3.13
	Hispanic	34	506	29.91	8.78	0.60	0.88	3.10
	Asian/Pac. Islander/Native Hawaiian	34	764	29.84	8.30	0.60	0.86	3.05
	Alaska Native and American Indian	34	1801	26.97	8.33	0.54	0.86	3.07
	Two or more races	34	494	32.20	8.43	0.64	0.87	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 27–14. Writing Reliability by Socioeconomic Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Not Low Income	52	4989	41.10	12.93	0.69	0.94	3.20
	Low Income	52	4503	33.11	13.54	0.55	0.94	3.44
4	Not Low Income	50	5102	41.66	11.22	0.69	0.92	3.25
	Low Income	50	4556	34.76	12.11	0.58	0.92	3.46
5	Not Low Income	50	5232	41.24	11.06	0.69	0.90	3.53
	Low Income	50	4437	34.79	11.45	0.58	0.90	3.66
6	Not Low Income	50	5257	41.82	10.73	0.70	0.89	3.55
	Low Income	50	4373	34.37	11.64	0.57	0.90	3.74
7	Not Low Income	50	5151	40.30	10.99	0.67	0.89	3.59
	Low Income	50	4128	32.83	11.38	0.55	0.89	3.75
8	Not Low Income	50	5383	41.94	10.26	0.70	0.88	3.61
	Low Income	50	3859	34.99	10.97	0.58	0.88	3.75
9	Not Low Income	50	5544	41.58	10.86	0.69	0.87	3.91
	Low Income	50	3751	34.38	11.56	0.57	0.88	3.99
10	Not Low Income	34	5497	33.56	7.85	0.67	0.86	2.92
	Low Income	34	3261	27.91	8.55	0.56	0.87	3.11

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 27–15. Writing Reliability by English Proficiency Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	English Proficient	52	8242	39.30	13.12	0.65	0.94	3.28
	Limited English Proficient	52	1250	24.22	10.77	0.40	0.89	3.53
4	English Proficient	50	8419	40.18	11.39	0.67	0.92	3.31
	Limited English Proficient	50	1239	26.31	10.09	0.44	0.87	3.57
5	English Proficient	50	8639	39.76	11.06	0.66	0.90	3.57
	Limited English Proficient	50	1030	25.92	9.35	0.43	0.84	3.76
6	English Proficient	50	8774	39.81	11.11	0.66	0.89	3.62
	Limited English Proficient	50	856	24.42	8.49	0.41	0.80	3.80
7	English Proficient	50	8401	38.40	11.16	0.64	0.89	3.64
	Limited English Proficient	50	878	23.32	8.08	0.39	0.78	3.77
8	English Proficient	50	8389	40.35	10.47	0.67	0.88	3.65
	Limited English Proficient	50	853	26.13	8.59	0.44	0.81	3.77
9	English Proficient	50	8382	40.17	11.02	0.67	0.87	3.93
	Limited English Proficient	50	913	24.94	8.22	0.42	0.76	4.02
10	English Proficient	34	7913	32.48	8.10	0.65	0.87	2.97
	Limited English Proficient	34	845	21.92	6.79	0.44	0.79	3.14

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 27–16. Writing Reliability by Migrant Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Non-Migrant	52	8932	37.61	13.74	0.63	0.94	3.32
	Migrant	52	560	32.66	14.16	0.54	0.94	3.43
4	Non-Migrant	50	9015	38.75	12.05	0.65	0.92	3.34
	Migrant	50	643	33.60	12.47	0.56	0.92	3.50
5	Non-Migrant	50	9018	38.60	11.63	0.64	0.90	3.59
	Migrant	50	651	33.93	11.74	0.57	0.90	3.70
6	Non-Migrant	50	8947	38.76	11.71	0.65	0.90	3.63
	Migrant	50	683	34.16	11.50	0.57	0.89	3.76
7	Non-Migrant	50	8615	37.34	11.73	0.62	0.90	3.66
	Migrant	50	664	32.20	11.12	0.54	0.89	3.77
8	Non-Migrant	50	8602	39.39	11.05	0.66	0.89	3.67
	Migrant	50	640	34.25	10.69	0.57	0.88	3.76
9	Non-Migrant	50	8624	39.03	11.63	0.65	0.89	3.94
	Migrant	50	671	34.15	11.57	0.57	0.88	3.99
10	Non-Migrant	34	8206	31.70	8.53	0.63	0.88	3.00
	Migrant	34	552	27.87	8.28	0.56	0.86	3.05

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 27–17. Writing Reliability by Special Education Status**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Regular Education	52	8116	38.84	13.38	0.65	0.94	3.29
	Individualized Education Plan	52	1376	28.29	12.86	0.47	0.93	3.49
4	Regular Education	50	8252	39.98	11.57	0.67	0.92	3.32
	Individualized Education Plan	50	1406	29.16	11.32	0.49	0.90	3.50
5	Regular Education	50	8258	39.99	11.00	0.67	0.89	3.57
	Individualized Education Plan	50	1411	28.27	10.58	0.47	0.88	3.66
6	Regular Education	50	8260	40.30	10.89	0.67	0.89	3.62
	Individualized Education Plan	50	1370	27.20	10.43	0.45	0.88	3.67
7	Regular Education	50	8053	38.81	10.95	0.65	0.89	3.64
	Individualized Education Plan	50	1226	24.92	9.62	0.42	0.85	3.71
8	Regular Education	50	8165	40.61	10.26	0.68	0.87	3.66
	Individualized Education Plan	50	1077	27.09	9.95	0.45	0.86	3.68
9	Regular Education	50	8219	40.36	10.83	0.67	0.87	3.94
	Individualized Education Plan	50	1076	25.85	9.97	0.43	0.85	3.86
10	Regular Education	34	7857	32.61	7.89	0.65	0.86	2.96
	Individualized Education Plan	34	901	21.41	7.61	0.43	0.82	3.18

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 27–18. Writing Reliability by Gender**

Grade	Subpopulation Group	L	N	Mean	SD	Mean p-value	Reliability	SEM
3	Female	52	4647	39.56	13.44	0.66	0.94	3.26
	Male	52	4845	35.16	13.82	0.59	0.94	3.37
4	Female	50	4666	40.70	11.67	0.68	0.92	3.31
	Male	50	4992	36.26	12.19	0.60	0.92	3.35
5	Female	50	4715	40.39	11.09	0.67	0.89	3.64
	Male	50	4954	36.27	11.90	0.60	0.91	3.51
6	Female	50	4633	41.13	10.99	0.69	0.89	3.64
	Male	50	4997	35.94	11.89	0.60	0.91	3.59
7	Female	50	4580	39.50	11.08	0.66	0.89	3.66
	Male	50	4699	34.51	11.89	0.58	0.91	3.66
8	Female	50	4506	41.60	10.35	0.69	0.87	3.66
	Male	50	4736	36.59	11.25	0.61	0.89	3.66
9	Female	50	4527	41.22	10.92	0.69	0.87	3.97
	Male	50	4768	36.26	11.89	0.60	0.89	3.89
10	Female	34	4277	33.44	8.02	0.67	0.87	2.88
	Male	34	4481	29.57	8.64	0.59	0.87	3.06

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