

Appendix 3_9i Extended Assessment Mathematics High Factor Analysis

Oregon 2008 Extended Assessment

High Grade Band MATH Task Factor Analysis

Math Items Across all Tasks

N of Cases = 351

N of Items = 50

Inter-item Correlations**Summary Item Statistics**

	Mean	Min	Max	Range	Maxi / Min	Var	N Items
Item Means	.962	.450	1.570	1.120	3.487	.074	50
Item Variances	.761	.393	.991	.598	2.524	.027	50
Inter-Item Correlations	.281	.048	.586	.538	12.095	.009	50

Alpha = .950

Standardized item alpha = .951

KMO and Bartlett's Test

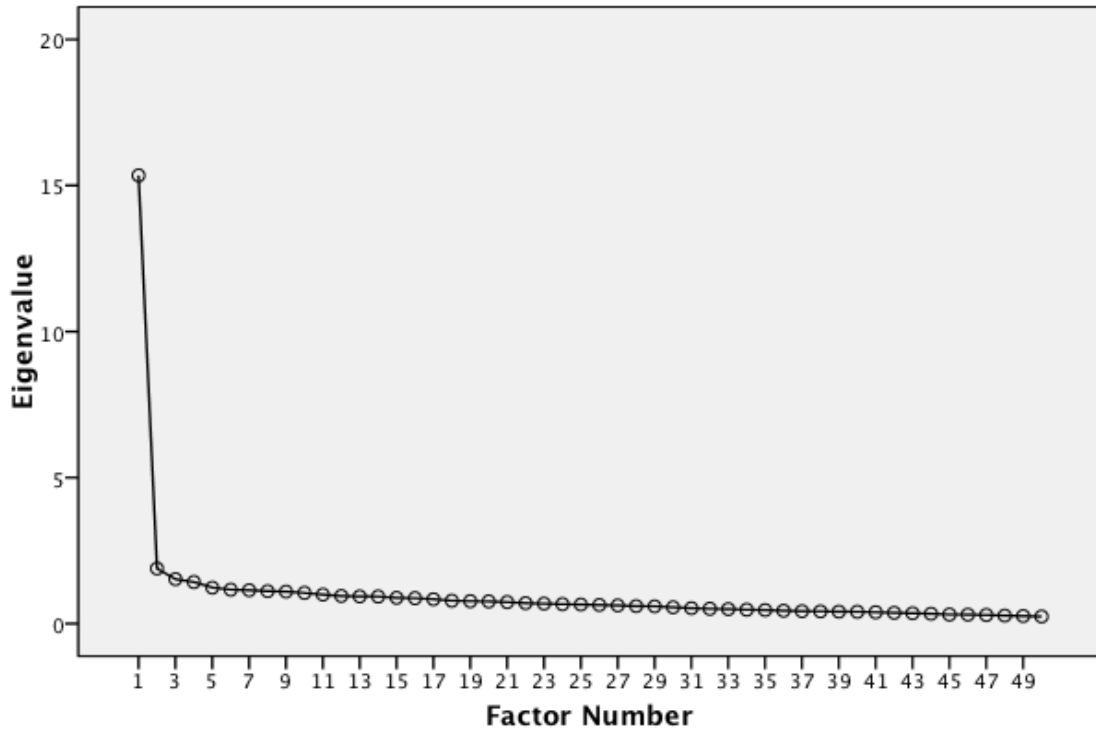
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.950
Bartlett's Test of Sphericity	Approx. Chi-Square	6727.080
	df	1225
	Sig.	.000

Factor Analysis**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	15.345	30.690	30.690	4.852	9.705	9.705	6.010	12.021
2	1.890	3.781	34.470	6.309	12.618	22.323	2.949	5.898	17.918
3	1.526	3.052	37.522	1.130	2.260	24.583	2.731	5.462	23.380
4	1.426	2.852	40.374	5.105	10.209	34.792	1.972	3.944	27.324
5	1.235	2.470	42.844	1.167	2.334	37.126	1.647	3.295	30.619
6	1.167	2.333	45.178	.828	1.657	38.783	1.619	3.239	33.858
7	1.147	2.295	47.473	.837	1.673	40.456	1.569	3.138	36.996
8	1.114	2.228	49.701	.569	1.138	41.594	1.209	2.417	39.413
9	1.097	2.194	51.895	.513	1.027	42.620	1.029	2.059	41.472
10	1.055	2.111	54.006	.447	.893	43.514	1.021	2.042	43.514

Extraction Method: Maximum Likelihood.

Scree Plot



Goodness-of-fit Test

Chi-Square	df	Sig.
765.846	770	.535

Difference Between Model Fit for 1 Factor and Multiple Factor Models

chisq1	chisq2	chidiff	df1	df2	dfdifff	prob
1755.92	765.85	990.07	1175	770	405	.00

Rotated Factor Matrix^a

	Factor									
	1	2	3	4	5	6	7	8	9	10
t2r01	.505	.172	.313	-.035	.062	.083	.118	.094	-.070	.124
t2r02	.467	.240	.375	.075	.180	-.081	.097	.025	.163	.003
t2r03	.530	.406	.144	.012	.062	.045	.119	-.024	.182	.058
t2r04	.120	.189	.224	.001	.132	.000	.142	.113	.430	.001
t2r05	.163	.387	.159	.077	.053	.027	.036	.057	.219	.048
t3r01	.368	.180	.110	.163	.118	.161	.147	.080	.151	.047
t3r02	.399	.229	.225	.015	.069	.094	.137	-.015	.004	.131
t3r03	.023	.304	.110	.103	.399	-.026	.028	.060	.058	.030
t3r04	.127	.614	.004	.070	.042	.256	-.008	.047	-.040	.073
t3r05	.032	.424	.073	-.041	.135	.060	.013	.093	.094	.063
t4r01	.457	.174	.156	.078	.190	.046	.097	.073	.043	.821
t4r02	.252	.171	.181	.066	.050	.120	.437	.102	.079	.047
t4r03	.303	.062	.185	.187	.145	.107	.884	.011	.128	.055
t4r04	.171	.206	.080	.092	.222	.098	.171	.119	.039	.077
t4r05	.405	.092	.450	.157	.013	.053	.125	.056	.076	.126
t5r01	.138	.501	.106	.203	.062	.017	.062	.033	-.036	.013
t5r02	.315	.410	.160	.231	.038	-.033	.090	-.044	.111	.071
t5r03	.448	.047	.292	.222	.041	.043	.202	.054	.146	.031
t5r04	.375	.186	.274	.232	.143	.108	.188	.059	.240	.066
t5r05	.383	.382	.123	.198	.211	.042	.168	-.022	.064	.033
t6r01	.396	.234	.275	.184	.245	.214	.116	.086	.313	.062
t6r02	.303	.218	.402	.151	-.015	.114	.116	.117	.272	.143
t6r03	.555	.117	.302	.051	.273	.214	.217	.070	.126	.127
t6r04	.410	.076	.236	.281	.222	.176	.115	.110	.194	.000
t6r05	.391	.269	.128	.131	.182	.246	.087	.096	.045	.038
t7r01	.214	.198	.117	.101	.162	.099	.072	.913	.122	.050
t7r02	.298	.062	.219	.218	.096	.070	.029	-.039	.165	.114
t7r03	.113	.149	.115	.131	.061	.096	.081	.062	-.010	-.030
t7r04	.487	.015	.408	.135	.258	.190	.137	.132	.168	.092
t7r05	.383	.285	.109	.231	.137	.176	.117	.180	.123	.088

t8r01	.125	.116	.499	.116	.171	.047	.096	.018	.142	.049
t8r02	.128	.313	-.009	.057	.067	.239	.109	.006	.108	-.056
t8r03	.274	.268	.020	.085	.208	.061	.078	.100	.029	-.064
t8r04	.372	.068	.237	.083	.226	.252	.133	.229	.052	.065
t8r05	.394	.266	.110	.251	.332	.158	.013	.130	.089	.102
t9r01	.561	.206	.019	.208	-.160	.237	.114	.070	.129	.237
t9r02	.509	.184	.094	.163	.002	.162	.089	.059	.147	-.010
t9r03	.589	.152	.119	.186	.142	.072	.102	.145	-.124	.070
t9r04	.248	.112	.287	.415	.031	.083	.049	.133	.145	.062
t9r05	.469	.027	.097	.219	.316	.254	.069	.020	.262	.177
t10r01	.125	.263	.454	.107	.033	.287	.058	.054	.108	.014
t10r02	.142	.218	.202	.236	.146	.322	.086	.104	.153	.102
t10r03	.366	.169	.288	.288	.029	.413	.081	.107	.098	.153
t10r04	.309	.213	.140	.122	.106	.477	.122	.041	-.057	-.003
t10r05	.357	.236	.240	.372	.346	.260	.060	.070	.035	.055
t11r01	.476	.162	.214	.173	.174	.347	.098	.104	-.035	.026
t11r02	.124	.134	.173	.107	.392	.128	.091	.083	.104	.100
t11r03	.137	.182	.150	.325	.244	.188	.168	-.059	-.031	-.099
t11r04	.227	-.007	.445	.165	.240	.094	.096	.040	-.068	-.050
t11r05	.153	.161	.119	.634	.162	.111	.105	.048	-.004	.046

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser
Normalization.

a. Rotation converged in 14 iterations.

Task Level Factor Analysis**Descriptive Statistics**

	Mean	Std. Deviation	Analysis N
t2tot	5.41	2.736	362
t3tot	3.58	2.700	362
t4tot	6.26	3.009	362
t5tot	4.92	2.704	362
t6tot	5.23	3.018	362
t7tot	4.26	2.884	362
t8tot	3.93	2.893	362
t9tot	4.72	3.096	362
t10tot	4.62	3.144	362
t11tot	4.54	3.137	362

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.957
Bartlett's Test of Sphericity	Approx. Chi-Square	2581.471
	df	45
	Sig.	.000

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.574	65.740	65.740	6.204	62.035	62.035
2	.596	5.964	71.704			
3	.504	5.038	76.742			
4	.462	4.624	81.366			
5	.404	4.038	85.403			
6	.351	3.513	88.916			
7	.339	3.388	92.304			
8	.295	2.952	95.257			

9	.261	2.612	97.869		
10	.213	2.131	100.000		

Extraction Method: Maximum Likelihood.

Factor Matrix^a

	Factor
	1
t2tot	.772
t3tot	.694
t4tot	.807
t5tot	.797
t6tot	.888
t7tot	.798
t8tot	.754
t9tot	.819
t10tot	.809
t11tot	.720

Goodness-of-fit Test

Chi-Square	df	Sig.
80.899	35	.000