New York State Regents Examination in Living Environment

2018

1.3 TARGET POPULATION (STANDARD 7.2)

Table 1 Total Examinee Population: Regents Examination in Living Environment

	August Admin*		January Admin**		June Admin***	
Demographics	Number	Percent	Number	Percent	Number	Percent
All Students	22,620	100.00	35,310	100.00	228,813	100.00
Race/Ethnicity						

RYHUDOO ZRXOG EH PRUH OLNHO\ WR DQVZHU WKH VDP

Item	Number of Students	-Value	SD	Point-Biserial	Point-Biserial Distractor 1	Point-Biserial Distractor 2	Point-Biserial Distractor 3

Table 3

Chapter 3: IRT Calibrations, Equating, and Scaling (Standards 2, and 4.10)

LQGHQ DQG +DPEOHWRQ

H[DPLQHH¶V UHVSRQVH RQ D WHVW LWHP WR DQ XQGHUO\LQJ
RI DV SHUIRUPDQFH RQ WKH WHVW DQG LV GHILQHG DV ³WKH
RQ WKH WHVW RI LQWHUHVW´ +DPEOHWRQ 6ZDPLQDWKDQ D

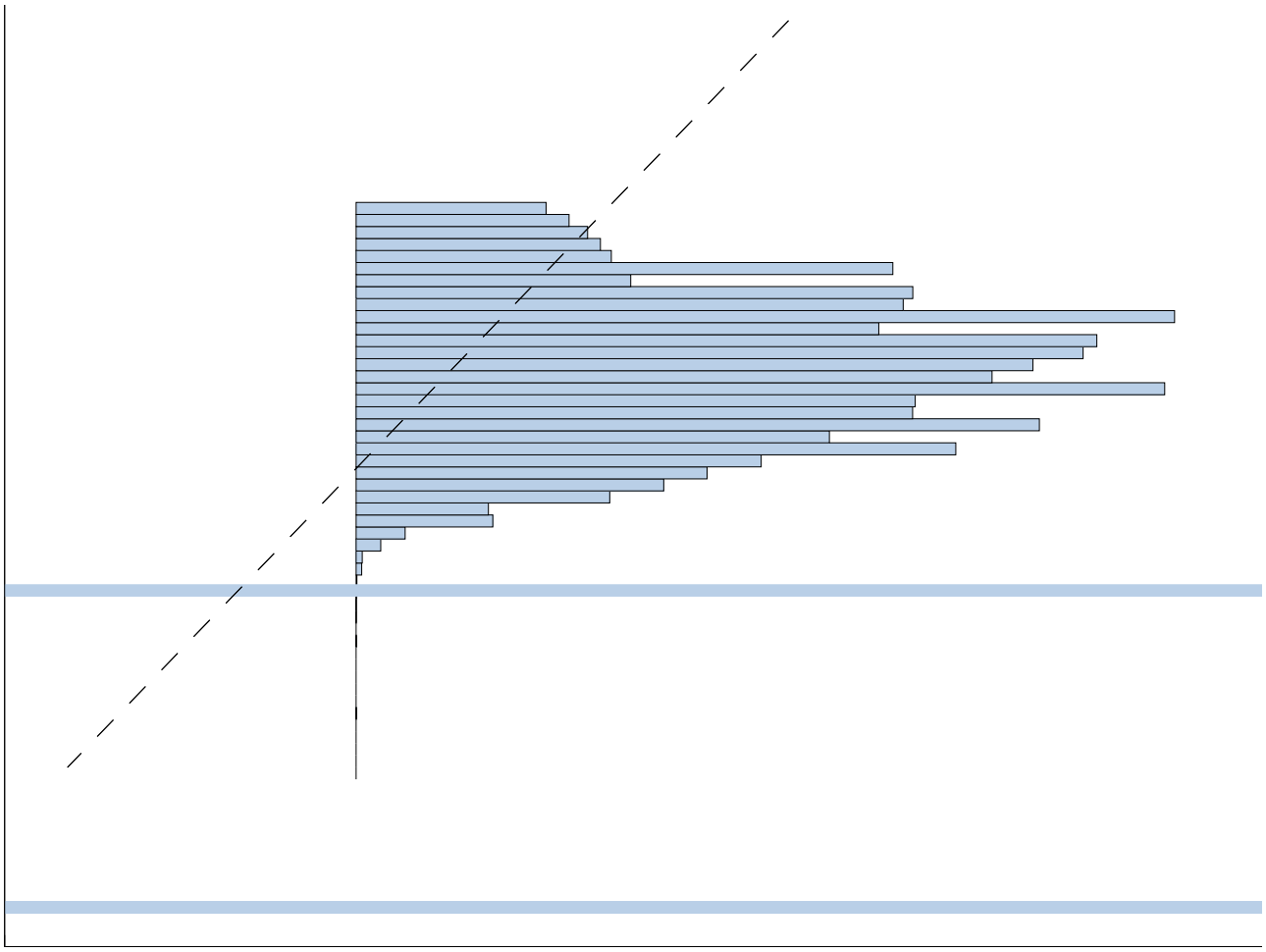

Figure 2 Student Performance Map: Regents Examination in Living Environment

3.5 CHECKING RASCH ASSUMPTIONS

Unidimensionality

V ¶

Figure 3 Scree Plot: Regents Examination in Living Environment

Local Independence

¶ V W K H H [D P L Q H H ‘ *X* *X*₁ *X*₂ «*X*ₙ *x* *x*₁ *x*₂ «*x*ₙ

Coefficient Alpha

³LQYH8ÚWHKGDSH ZLWK VPDOOHU &6(0V DW WKH HQGV RI WKH V

S VWDWH ³:KHQ UHODWLYH W

´

Results and Observations

TEST ONE

high

VHW RI ³DQFKRU´ SDSHUV UHSUHVHQW

REMHFWLYH RI MLQHVLQJ³UHQRWV LV WR FUHDWH D WUDLQL

Item Difficulty

p

p

p

Item Discrimination

5.5 EVIDENCE BASED ON TESTING CONSEQUENCES

References

Standards for educational and psychological testing

Assessment in Education: Principles, Policy & Practice

Language Testing

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Child Development 55 ±

Table A.2 Test Map f

Position	Item Type	Max Points	Weight	Standard	Key

Position	Item Type	Max Points	Weight	Standard	Key Idea	PI	Mean	Point-Biserial	RID	INFIT

Table A.3 Test Map for June 2018 Administration

Position	Item Type	Max Points	Weight	Standard	Key Idea	PI	Mean	Point-Biserial	RID	INFIT
1	MC	1	1	4	6	6.0	0.83	0.43	-1.6829	0.93
2	MC	1	1	4	2	2.1j	0.32	0.24	1.2178	

Position	Item Type	Max Points	Weight	Standard	Key Idea	PI	Mean	Point-Biserial	RID	INFIT
39	MC	1	1	4	5	5.1f	0.43	0.44	0.6216	1.03
40	MC	1	1	4	5	5.2d	0.77	0.35	-1.2026	1.06

Position	Item Type	Max Points	Weight	Standard	Key Idea	PI	Mean	Point-Biserial	RID	INFIT

Appendix B: Raw-to-Theta-to-Scale Score Conversion Tables

Table B.1 Score Table for August 2017 Administration

Raw Score	Ability	Scale Score
0	-6.1172	0.000
1	-4.8993	2.601

Raw Score	Ability	Scale Score
41	-0.2132	65.331
42	-	

Raw Score	Ability	Scale Score
82	3.5668	96.276

QQ EMC q2 0 0 1 471.58 598.06 Tm0 G43QQ EMC q21 0 0 1 471.58 598.06 Tm0 G44.00972 Tc[(82)] TJEMC q21 0 0 1

Table B.3 Score Table for June 2018 Administration

Raw Score	Ability	Scale Score
0	-6.2449	0.000
41		

Appendix C: Item Writing Guidelines

CHECKLIST OF TEST CONSTRUCTION PRINCIPLES

Appendix D: Tables and Figures for August 2017 Administration

Table D.1 Multiple-Choice Item Analysis Summary: Regents Examination in Living Environment

Item	Number of Students	-Value	SD	Point-Biserial	Point-Biserial Distractor 1	Point-Biserial Distractor 2	Point-Biserial Distractor 3
1	22,620						

Table D.2 Constructed-Response Item Analysis Summary: Regents Examination in Living Environment

Item	Min. score	Max. score	Number of Students	Mean	SD	-Value	Point-Biserial

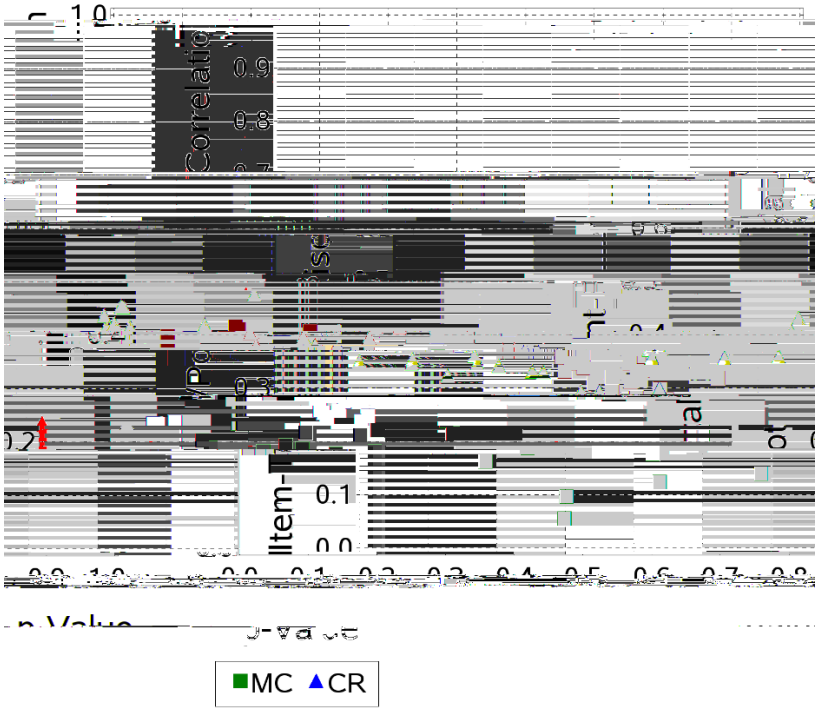

Figure D.1 Scatter Plot: Regents Examination in Living Environment

Table D.3 Descriptive Statistics in *p*-value and Point-Biserial Correlation: Regents Examination in Living Environment

Statistics	N	Mean	Min	Q1	Median	Q3	Max
p-value	85	0.42	0.12	0.32	0.44	0.54	0.73
Point-Biserial	85	0.31	0.06	0.25	0.33	0.37	0.48

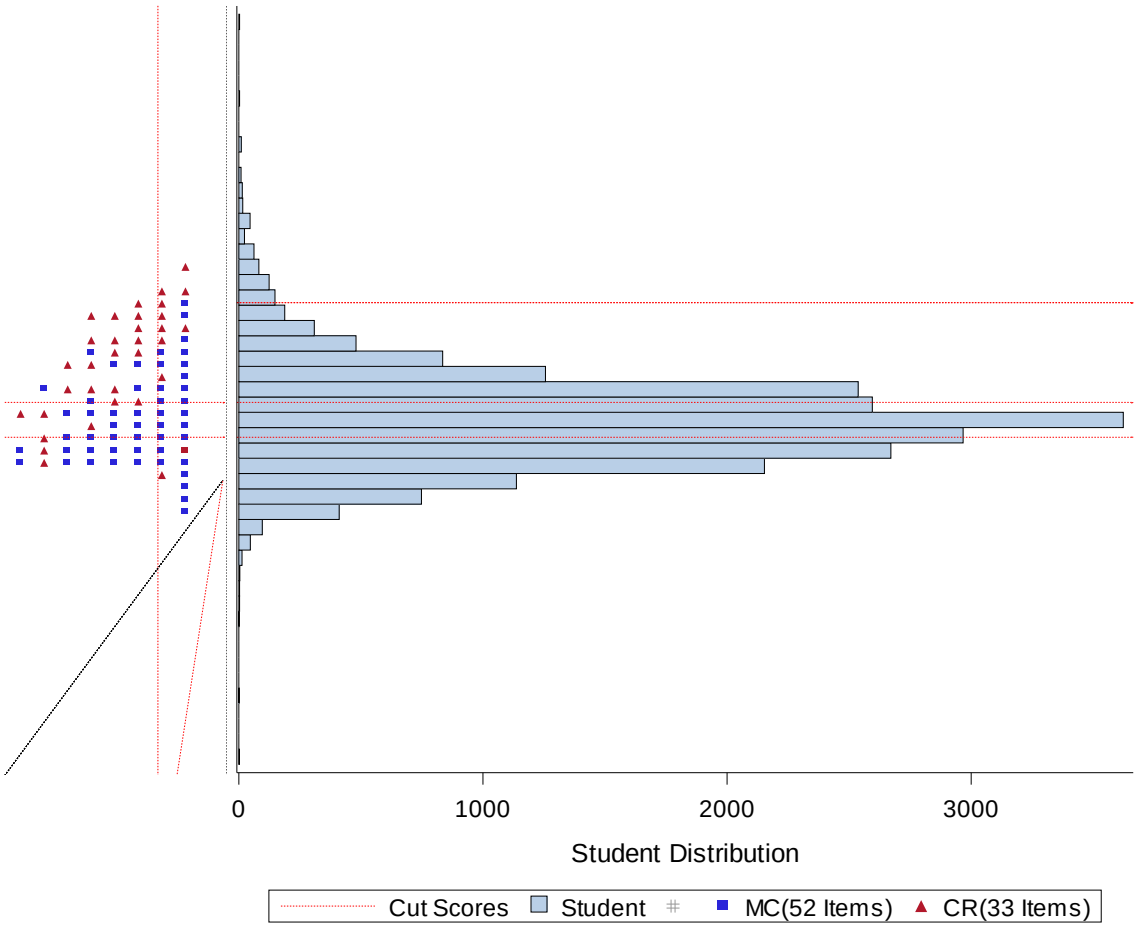

Figure D.2 Student Performance Map: Regents Examination in Living Environment

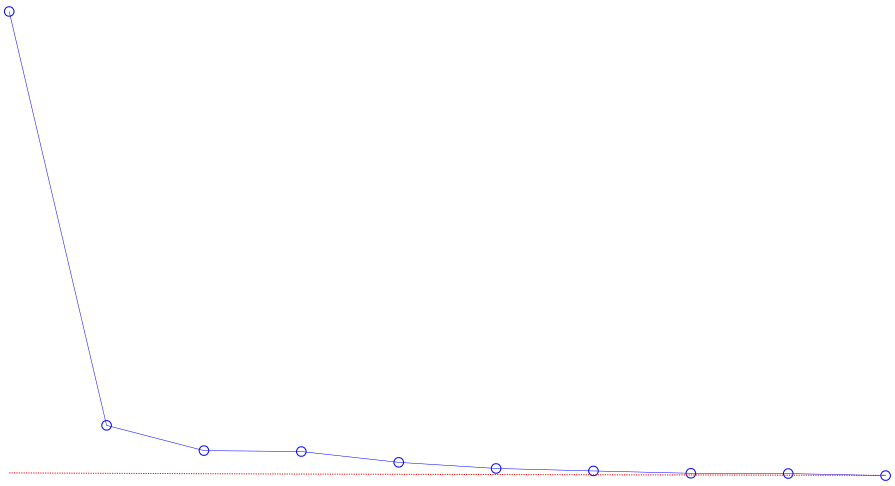

Figure D.3 Scree Plot: Regents Examination in Living Environment

Table D.4 Summary of Item Residual Correlations: Regents Examination in Living Environment

Statistic Type	Value
N	3,570
Mean	-0.01
SD	0.03
Minimum	-0.10
P_{10}	-0.04
P_{25}	-0.03
P_{50}	-0.02
P_{75}	0.00
P_{90}	0.02
Maximum	0.41
>|0.20|	1

Table D.5 Summary of INFIT Mean Square Statistics: Regents Examination in Living Environment

Table E.2 Constructed-Response Item Analysis Summary: Regents Examination in Living Environment

Item	Min. score	Max. score	Number of Students	Mean	SD	-Value	Point-Biserial
44	0	1	35,310	0.48	0.50	0.48	0.30
45	0	1	35,310	0.70	0.46	0.70	0.32
46	0	1	35,310	0.78	0.42	0.78	0.33
48	0	1	35,310	0.29	0.45	0.29	0.40
51	0	1	35,310	0.17	0.38	0.17	0.46
52	0	1	35,310	0.18	0.39	0.18	0.30
53	0	1	35,310	0.46	0.50	0.46	0.47

Figure E.1 Scatter Plot: Regents Examination in Living Environment

Table E.3 Descriptive Statistics in *p*-value and Point-Biserial Correlation: Regents Examination in Living Environment

Statistics	N	Mean	Min	Q1	Median	Q3	Max
p-value	85	0.42	0.12	0.28	0.40	0.55	0.79
Point-Biserial	85	0.31	0.09	0.25	0.31	0.36	0.47

Table E.5 Summary of INFIT Mean Square Statistics: Regents Examination in Living Environment

	INFITMean Square					
	N	Mean	SD	Min	Max	[0.7, 1.3]
Living Environment	85	1.00	0.06	0.88	1.15	[85/85]

Table E.6 Reliabilities and Standard Errors of Measurement: Regents Examination in Living Environment

Subject	Coefficient Alpha	SEM
Living Environment	0.89	4.09

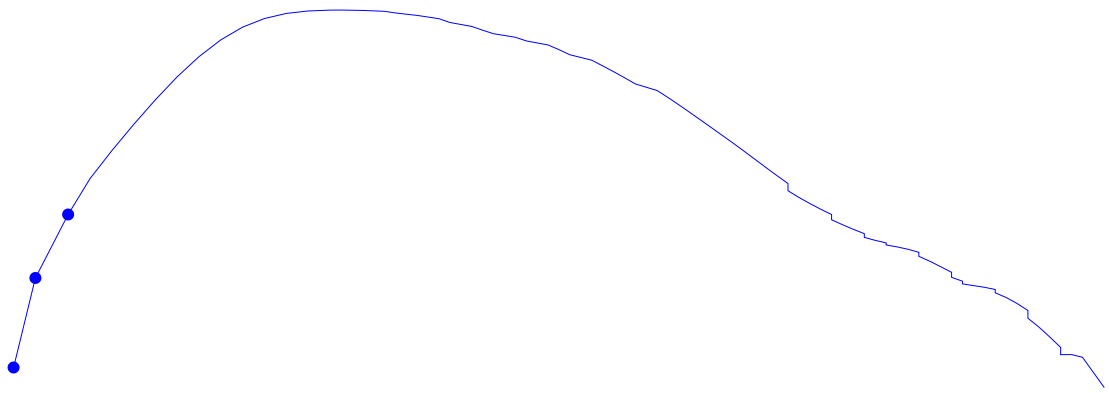

Figure E.4 Conditional Standard Error Plot: Regents Examination in Living Environment

Table E.8 Group Means: Regents Examination in Living Environment

Demographics	Number	Mean Scale Score	SD Scale Score
All Students*	35,310	57.57	13.05
Ethnicity			
American Indian/Alaska Native	336	57.96	13.47
Asian/Native Hawaiian/Other Pacific Islander	2,564	60.65	15.36
Black/African American	11,786	56.2	12.22
Hispanic/Latino	14,576	56.77	12.22
Multiracial	400	60.31	13.63
White	5,623	60.91	14.66
English Language Learner/Multilingual Learner			