

A Study of the Alignment of the NWEA RIT Scale with the Wisconsin Assessment System

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Recently, NWEA completed a project to connect the scale of the tests used for Wisconsin mathematics and reading assessments with NWEA's RIT scale. Information from the Wisconsin assessments was used in a study to establish performance-level scores on the RIT scale that would indicate a good chance of success on these tests.

To perform the analysis, we linked aggregate state test results with NWEA test results for all schools whose NWEA test count for a grade and subject was between 95% and 105% of the count tested on the state assessment. This provided assurance that only schools that had tested a very similar population on both tests were included.

The Wisconsin state test is administered in fall. For the fall season, an equipercentile method was used to estimate the RIT score equivalent to each state performance level. For fall, we determined the percentage of the population within the selected study group that performed at each level on the state test and found the equivalent percentile ranges within the NWEA dataset to estimate the cut scores. For example, if 40% of the study group population in grade 3 mathematics performed below the proficient level on the state test, we would find the RIT score that would be equivalent to the 40th percentile for the study population (this would not be the same as the 40th percentile in the NWEA norms). This RIT score would be the estimated point on the NWEA RIT scale that would be equivalent to the minimum score for proficiency on the state test.

More complete documentation about this method can be found on our website.

Tables 1 through 6 show the best estimate of the RIT equivalent to each Wisconsin performance level for same-season (fall) and prior-season (spring) RIT scores. These tables may be used to identify students who may need additional help to perform well on these tests.

Tables 7 through 12 show the proportion of students achieving various RIT score ranges whom we estimate would achieve a proficient score on the state assessment. These tables can be used to assist in identifying students who are not likely to pass these assessments, thereby increasing the probability that intervention strategies will be planned and implemented.

Table 1 – Recommended same-season (fall) RIT cut scores for Wisconsin performance levels – Reading

Grade	Minimal Performance		Percentile	Proficient		Advanced	
	Cut score	Cut score		Cut score	Percentile	Cut score	Percentile
3	<157	157	2	174	14	193	53
4	<170	170	4	185	16	203	57
5	<178	178	4	193	16	210	58
6	<184	184	5	198	16	214	55
7	<188	188	5	202	17	219	59
8	<192	192	5	204	14	223	60
10	<204	204	8	216	23	229	59

Table 2 – Recommended same-season (fall) RIT cut scores for Wisconsin performance levels – Language Usage

Grade	Minimal Performance		Percentile	Proficient		Advanced	
	Cut score	Cut score		Cut score	Percentile	Cut score	Percentile
3	<164	164	3	181	19	198	60
4	<172	172	3	191	19	206	60
5	<186	186	6	201	24	214	63
6	<194	194	8	207	28	219	66
7	<201	201	11	212	33	223	69
8	<205	205	13	216	37	226	72
10	<202	202	5	216	23	233	81

Note: blue text denotes extrapolated cut score

Table 3 – Recommended same-season (fall) RIT cut scores for Wisconsin performance levels – Mathematics

Grade	Minimal Performance	Basic	Proficient		Advanced		
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile
3	<182	182	20	186	29	198	68
4	<192	192	18	197	29	208	68
5	<197	197	14	203	26	218	70
6	<199	199	11	206	21	225	69
7	<203	203	11	211	21	232	69
8	<205	205	9	217	23	239	72
10	<215	215	11	225	23	248	74

Table 4 – Recommended prior-season (spring) RIT cut scores for Wisconsin performance levels – Reading

Grade	Minimal Performance		Basic		Proficient		Advanced	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<156	156	2	172	14	191	54	
4	<168	168	4	184	16	202	58	
5	<175	175	4	191	16	209	58	
6	<185	185	5	198	16	214	57	
7	<188	188	5	203	18	219	59	
8	<190	190	5	203	14	223	61	
10	<202	202	8	215	23	229	61	

Table 5 – Recommended prior-season (spring) RIT cut scores for Wisconsin performance levels – Language Usage

Grade	Minimal Performance		Basic		Proficient		Advanced	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<163	163	3	179	19	196	60	
4	<170	170	3	190	19	205	60	
5	<184	184	6	199	24	213	64	
6	<196	196	9	207	29	219	67	
7	<201	201	11	213	34	223	71	
8	<205	205	14	216	39	226	74	
10	<200	200	5	215	23	233	82	

Note: blue text denotes extrapolated cut score

Table 6 – Recommended prior-season (spring) RIT cut scores for Wisconsin performance levels – Mathematics

Grade	Minimal Performance		Basic		Proficient		Advanced	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<181	181	21	184	29	197	71	
4	<191	191	18	196	30	207	68	
5	<196	196	14	202	26	218	72	
6	<201	201	12	207	22	226	70	
7	<203	203	11	211	22	232	70	
8	<204	204	9	216	24	239	72	
10	<214	214	11	225	23	250	75	

Table 7 – Proportion of students passing the Wisconsin state reading assessment based on same-season (fall) reading RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
145	6%	2%	1%	1%	0%	0%	0%
150	10%	4%	2%	1%	1%	1%	0%
155	16%	6%	3%	2%	1%	1%	0%
160	23%	9%	4%	3%	2%	1%	0%
165	33%	14%	7%	4%	3%	2%	1%
170	45%	22%	11%	7%	5%	4%	1%
175	57%	31%	17%	11%	8%	6%	2%
180	69%	43%	25%	17%	12%	10%	3%
185	78%	55%	36%	25%	18%	16%	5%
190	86%	67%	48%	36%	27%	23%	8%
195	91%	77%	60%	48%	38%	33%	13%
200	94%	84%	71%	60%	50%	45%	20%
205	96%	90%	80%	71%	62%	57%	29%
210	98%	94%	87%	80%	73%	69%	40%
215	99%	96%	92%	87%	82%	78%	52%
220	99%	98%	95%	92%	88%	86%	64%
225	99%	99%	97%	95%	92%	91%	75%
230	100%	99%	98%	97%	95%	94%	83%
235	100%	99%	99%	98%	97%	96%	89%
240	100%	100%	99%	99%	98%	98%	93%
245	100%	100%	100%	99%	99%	99%	96%

Table 8 – Proportion of students passing the Wisconsin state language usage assessment based on same-season (fall) language usage RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
150	5%	2%	1%	0%	0%	0%	0%
155	8%	3%	1%	1%	0%	0%	0%
160	13%	5%	2%	1%	1%	0%	0%
165	20%	8%	3%	2%	1%	1%	1%
170	29%	13%	5%	3%	2%	1%	1%
175	40%	20%	8%	5%	3%	2%	2%
180	52%	29%	13%	8%	5%	3%	3%
185	64%	40%	20%	12%	8%	5%	5%
190	75%	52%	29%	18%	12%	8%	8%
195	83%	64%	40%	27%	18%	13%	13%
200	89%	75%	52%	38%	27%	20%	20%
205	93%	83%	64%	50%	38%	29%	29%
210	96%	89%	75%	62%	50%	40%	40%
215	97%	93%	83%	73%	62%	52%	52%
220	98%	96%	89%	82%	73%	64%	64%
225	99%	97%	93%	88%	82%	75%	75%
230	99%	98%	96%	92%	88%	83%	83%
235	100%	99%	97%	95%	92%	89%	89%
240	100%	99%	98%	97%	95%	93%	93%
245	100%	100%	99%	98%	97%	96%	96%

Table 9 – Proportion of students passing the Wisconsin state mathematics assessment based on same-season (fall) mathematics RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
155	5%	2%	1%	1%	0%	0%	0%
160	8%	3%	2%	1%	1%	0%	0%
165	13%	5%	3%	2%	1%	1%	0%
170	20%	8%	4%	3%	2%	1%	1%
175	29%	12%	7%	5%	3%	2%	1%
180	40%	18%	11%	8%	5%	3%	1%
185	52%	27%	17%	13%	8%	5%	2%
190	64%	38%	25%	20%	13%	8%	4%
195	75%	50%	36%	29%	20%	12%	6%
200	83%	62%	48%	40%	29%	18%	9%
205	89%	73%	60%	52%	40%	27%	14%
210	93%	82%	71%	64%	52%	38%	22%
215	96%	88%	80%	75%	64%	50%	31%
220	97%	92%	87%	83%	75%	62%	43%
225	98%	95%	92%	89%	83%	73%	55%
230	99%	97%	95%	93%	89%	82%	67%
235	99%	98%	97%	96%	93%	88%	77%
240	100%	99%	98%	97%	96%	92%	84%
245	100%	99%	99%	98%	97%	95%	90%
250	100%	100%	99%	99%	98%	97%	94%
255	100%	100%	100%	99%	99%	98%	96%

Table 10 – Proportion of students passing the Wisconsin state reading assessment based on prior-season (spring) reading RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
140	5%	1%	1%	0%	0%	0%	0%
145	8%	2%	1%	1%	0%	0%	0%
150	12%	4%	2%	1%	1%	1%	0%
155	18%	6%	3%	2%	1%	1%	0%
160	27%	10%	5%	3%	2%	2%	1%
165	38%	16%	8%	4%	3%	3%	1%
170	50%	23%	13%	7%	4%	4%	1%
175	62%	33%	20%	11%	7%	7%	2%
180	73%	45%	29%	17%	11%	11%	4%
185	82%	57%	40%	25%	17%	17%	6%
190	88%	69%	52%	36%	25%	25%	9%
195	92%	78%	64%	48%	36%	36%	14%
200	95%	86%	75%	60%	48%	48%	22%
205	97%	91%	83%	71%	60%	60%	31%
210	98%	94%	89%	80%	71%	71%	43%
215	99%	96%	93%	87%	80%	80%	55%
220	99%	98%	96%	92%	87%	87%	67%
225	100%	99%	97%	95%	92%	92%	77%
230	100%	99%	98%	97%	95%	95%	84%
235	100%	99%	99%	98%	97%	97%	90%
240	100%	100%	99%	99%	98%	98%	94%
245	100%	100%	100%	99%	99%	99%	96%

*Note: the grade indicated in this table is the grade that the student will be in when the state assessment is administered. Example: A 2nd grade student takes the MAP test in the spring and scores a RIT of 180, a teacher would find 180 in the RIT Range column and then follow the 3rd grade column down to the 180 point and see that the probability that the student will pass the 3rd grade state assessment is 73%.

Table 11 – Proportion of students passing the Wisconsin state language usage assessment based on prior-season (spring) language usage RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
150	6%	2%	1%	0%	0%	0%	0%
155	10%	4%	1%	1%	0%	0%	0%
160	16%	6%	2%	1%	1%	0%	1%
165	23%	9%	4%	2%	1%	1%	1%
170	33%	14%	6%	3%	2%	1%	1%
175	45%	22%	10%	5%	3%	2%	2%
180	57%	31%	16%	8%	4%	3%	4%
185	69%	43%	23%	12%	7%	5%	6%
190	78%	55%	33%	18%	11%	8%	9%
195	86%	67%	45%	27%	17%	13%	14%
200	91%	77%	57%	38%	25%	20%	22%
205	94%	84%	69%	50%	36%	29%	31%
210	96%	90%	78%	62%	48%	40%	43%
215	98%	94%	86%	73%	60%	52%	55%
220	99%	96%	91%	82%	71%	64%	67%
225	99%	98%	94%	88%	80%	75%	77%
230	99%	99%	96%	92%	87%	83%	84%
235	100%	99%	98%	95%	92%	89%	90%
240	100%	99%	99%	97%	95%	93%	94%
245	100%	100%	99%	98%	97%	96%	96%

*Note: the grade indicated in this table is the grade that the student will be in when the state assessment is administered. Example: A 2nd grade student takes the MAP test in the spring and scores a RIT of 180, a teacher would find 180 in the RIT Range column and then follow the 3rd grade column down to the 180 point and see that the probability that the student will pass the 3rd grade state assessment is 57%.

Table 12 – Proportion of students passing the Wisconsin state mathematics assessment based on prior-season (spring) mathematics RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
155	6%	2%	1%	1%	0%	0%	0%
160	10%	3%	2%	1%	1%	0%	0%
165	16%	5%	3%	2%	1%	1%	0%
170	23%	8%	5%	3%	2%	1%	1%
175	33%	13%	8%	5%	3%	2%	1%
180	45%	20%	12%	8%	5%	3%	1%
185	57%	29%	18%	12%	8%	5%	2%
190	69%	40%	27%	18%	13%	8%	4%
195	78%	52%	38%	27%	20%	13%	6%
200	86%	64%	50%	38%	29%	20%	9%
205	91%	75%	62%	50%	40%	29%	14%
210	94%	83%	73%	62%	52%	40%	22%
215	96%	89%	82%	73%	64%	52%	31%
220	98%	93%	88%	82%	75%	64%	43%
225	99%	96%	92%	88%	83%	75%	55%
230	99%	97%	95%	92%	89%	83%	67%
235	99%	98%	97%	95%	93%	89%	77%
240	100%	99%	98%	97%	96%	93%	84%
245	100%	99%	99%	98%	97%	96%	90%
250	100%	100%	99%	99%	98%	97%	94%
255	100%	100%	100%	99%	99%	98%	96%

*Note: the grade indicated in this table is the grade that the student will be in when the state assessment is administered. Example: A 2nd grade student takes the MAP test in the spring and scores a RIT of 180, a teacher would find 180 in the RIT Range column and then follow the 3rd grade column down to the 180 point and see that the probability that the student will pass the 3rd grade state assessment is 45%.