

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

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Recently, NWEA completed a project to connect the scale of the tests used for Minnesota mathematics and reading assessments with NWEA's RIT scale. Information from the Minnesota 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 Minnesota state test is administered in spring. For the spring season, an equipercentile method was used to estimate the RIT score equivalent to each state performance level. For spring, 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 4 show the best estimate of the RIT equivalent to each Minnesota performance level for same-season (spring) and prior-season (fall) RIT scores. These tables may be used to identify students who may need additional help to perform well on these tests.

Tables 5 through 8 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 (spring) RIT cut scores for Minnesota performance levels – Reading

Grade	Did Not Meet Standards		Partially Meets Standards		Meets Standards		Exceeds Standards	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<180	180	12	190	26	202	58	
4	<188	188	12	201	34	212	68	
5	<194	194	11	206	32	219	73	
6	<200	200	14	212	37	224	74	
7	<207	207	20	217	43	227	72	
8	<211	211	20	221	44	231	74	
10	<215	215	20	224	40	236	77	

Table 2 – Recommended same-season (spring) RIT cut scores for Minnesota performance levels – Mathematics

Grade	Did Not Meet Standards		Partially Meets Standards		Meets Standards		Exceeds Standards	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<180	180	5	196	30	211	79	
4	<198	198	17	208	43	224	85	
5	<208	208	24	220	54	234	86	
6	<213	213	25	225	52	242	88	
7	<218	218	27	230	52	247	86	
8	<221	221	24	235	51	252	85	
11	<244	244		254		264		

Percentile scores do not exist for Grade 11.

Table 3 – Recommended prior-season (fall) RIT cut scores for Minnesota performance levels – Reading

Grade	Did Not Meet Standards		Partially Meets Standards		Meets Standards		Exceeds Standards	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<172	172	12	182	27	195	59	
4	<182	182	12	195	34	207	70	
5	<188	188	11	201	32	215	74	
6	<196	196	14	208	37	220	74	
7	<204	204	20	214	43	224	74	
8	<208	208	20	218	45	228	75	
10	<215	215	21	223	40	235	79	

Table 4 – Recommended prior-season (fall) RIT cut scores for Minnesota performance levels – Mathematics

Grade	Did Not Meet Standards		Partially Meets Standards		Meets Standards		Exceeds Standards	
	Cut score	Cut score	Percentile	Cut score	Percentile	Cut score	Percentile	
3	<172	172	5	187	32	202	80	
4	<192	192	18	202	46	215	86	
5	<203	203	26	213	56	225	86	
6	<208	208	25	219	53	234	88	
7	<215	215	28	225	52	240	86	
8	<218	218	25	231	53	246	86	
11	<241	241		251		260		

Percentile scores do not exist for Grade 11.

Table 5 – Proportion of students passing the Minnesota state reading assessment based on same-season (spring) reading RIT range

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

Table 6 – Proportion of students passing the Minnesota state mathematics assessment based on same-season (spring) mathematics RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	11
165	5%	2%	1%	0%	0%	0%	0%
170	8%	3%	1%	1%	0%	0%	0%
175	13%	4%	1%	1%	1%	0%	0%
180	20%	7%	2%	1%	1%	1%	0%
185	29%	11%	4%	2%	1%	1%	0%
190	40%	17%	6%	4%	2%	1%	0%
195	52%	25%	9%	6%	4%	2%	0%
200	64%	36%	14%	9%	6%	4%	1%
205	75%	48%	22%	14%	9%	6%	1%
210	83%	60%	31%	22%	14%	9%	1%
215	89%	71%	43%	31%	22%	14%	2%
220	93%	80%	55%	43%	31%	22%	4%
225	96%	87%	67%	55%	43%	31%	6%
230	97%	92%	77%	67%	55%	43%	10%
235	98%	95%	84%	77%	67%	55%	16%
240	99%	97%	90%	84%	77%	67%	23%
245	99%	98%	94%	90%	84%	77%	33%
250	100%	99%	96%	94%	90%	84%	45%
255	100%	99%	98%	96%	94%	90%	57%
260	100%	100%	99%	98%	96%	94%	69%
265	100%	100%	99%	99%	98%	96%	78%
270	100%	100%	99%	99%	99%	98%	86%
275	100%	100%	100%	99%	99%	99%	91%
280	100%	100%	100%	100%	99%	99%	94%
285	100%	100%	100%	100%	100%	99%	96%

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

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	10
150	5%	1%	1%	0%	0%	0%	0%
155	8%	2%	1%	1%	0%	0%	0%
160	12%	4%	2%	1%	1%	0%	0%
165	18%	6%	3%	2%	1%	1%	0%
170	27%	9%	5%	3%	1%	1%	1%
175	38%	14%	8%	4%	2%	2%	1%
180	50%	22%	13%	7%	4%	3%	2%
185	62%	31%	20%	11%	6%	4%	3%
190	73%	43%	29%	17%	10%	7%	4%
195	82%	55%	40%	25%	16%	11%	7%
200	88%	67%	52%	36%	23%	17%	11%
205	92%	77%	64%	48%	33%	25%	17%
210	95%	84%	75%	60%	45%	36%	25%
215	97%	90%	83%	71%	57%	48%	36%
220	98%	94%	89%	80%	69%	60%	48%
225	99%	96%	93%	87%	78%	71%	60%
230	99%	98%	96%	92%	86%	80%	71%
235	100%	99%	97%	95%	91%	87%	80%
240	100%	99%	98%	97%	94%	92%	87%
245	100%	99%	99%	98%	96%	95%	92%
250	100%	100%	99%	99%	98%	97%	95%

Table 8 – Proportion of students passing the Minnesota state mathematics assessment based on prior-season (fall) mathematics RIT range

RIT Range	Percent in this range who pass						
	3	4	5	6	7	8	11
155	5%	1%	0%	0%	0%	0%	0%
160	8%	2%	1%	0%	0%	0%	0%
165	12%	3%	1%	1%	0%	0%	0%
170	18%	5%	2%	1%	1%	0%	0%
175	27%	8%	3%	1%	1%	0%	0%
180	38%	12%	4%	2%	1%	1%	0%
185	50%	18%	7%	4%	2%	1%	0%
190	62%	27%	11%	6%	4%	2%	0%
195	73%	38%	17%	10%	6%	3%	0%
200	82%	50%	25%	16%	9%	5%	1%
205	88%	62%	36%	23%	14%	8%	1%
210	92%	73%	48%	33%	22%	13%	2%
215	95%	82%	60%	45%	31%	20%	3%
220	97%	88%	71%	57%	43%	29%	5%
225	98%	92%	80%	69%	55%	40%	8%
230	99%	95%	87%	78%	67%	52%	13%
235	99%	97%	92%	86%	77%	64%	20%
240	100%	98%	95%	91%	84%	75%	29%
245	100%	99%	97%	94%	90%	83%	40%
250	100%	99%	98%	96%	94%	89%	52%
255	100%	100%	99%	98%	96%	93%	64%
260	100%	100%	99%	99%	98%	96%	75%
265	100%	100%	100%	99%	99%	97%	83%
270	100%	100%	100%	99%	99%	98%	89%
275	100%	100%	100%	100%	99%	99%	93%
280	100%	100%	100%	100%	100%	99%	96%