

Interpreting State of Iowa Performance using the *Iowa Assessments*TM

Educators, parents, policymakers, and students rely on the *Iowa Assessments* to provide important information about students' current achievement and growth in their achievement across years. These nationally standardized achievement tests are designed to allow the comparison of each student's performance in key content areas to that of students across Iowa and across the nation.

The *Iowa Assessments* measure student achievement in reading, mathematics, science, written expression, and social studies. Results of the *Iowa Assessments* support interpretations of growth and relative standing compared to students in the state and the nation. The Iowa Percentile Rank (IPR) indicates the level of a student's achievement compared with that of students from Iowa. This metric allows Iowa Testing Programs to chart educational progress since the 1950s and provides a basis for examining changes in Iowa student achievement over time. The National Percentile Rank (NPR) indicates the level of a student's achievement compared with that of students in the nation.

IPRs for the *Iowa Assessments* are based on 2012 and 2013 state data for grades 3 to 11. Scores for Reading and Mathematics (all grades except 9) and Science (grades 5, 8, and 11) are based on performance of all Iowa students in public and private schools. Scores in other content areas are based on Iowa students whose schools chose to administer tests in the content area. It is often the case that the districts that elect to administer the tests in other content areas tend to perform better. Therefore, IPRs in content areas other than Reading, Mathematics, and Science in the indicated grades should be interpreted cautiously.

Comparing NPRs and IPRs

Tables on the following pages compare 2012 and 2013 IPRs with 2011 NPRs. The left column shows selected 2011 NPRs, and the remaining columns show the 2012 and 2013 IPRs. Overall, the 2013 Iowa norms are very similar to the 2012 Iowa norms. In comparing IPRs to NPRs, a lower IPR means that students in Iowa scored better than students nationally.

To determine IPR of a grade 3 student with an NPR of 90 in Reading, find the row labeled 90 and read across to find the IPR under Reading in grade 3. A student at the 90th national percentile in Reading has an IPR of 86 in 2012 and an IPR of 87 in 2013. A student in grade 3 with an NPR of 50 in Mathematics has an IPR of 37 in both 2012 and 2013.

Comparing National Norms and Iowa Norms

For 2012 and 2013, on all tests at all grades, students in Iowa performed similar to or better than students in the nation. This is true across all performance levels from the lower end of the NPR scale (NPR = 10) to the upper end (NPR = 90). Comparing NPRs to IPRs leads to the following general observations:

- Students in Iowa tended to outperform students in the nation on all the tests, in all grades and at all performance levels.
- Iowa students in upper grades (9, 10, and 11) performed even better relative to the nation than those in lower grades.
- In Reading, Mathematics, and Science, Iowa students at nearly all performance levels outperformed students in the nation. Science at the upper performance levels in grades 5, 6, and 7 are exceptions to these observations.
- In Written Expression, Iowa students at all levels outperformed students nationally.
- In Social Studies, Iowa students at all levels outperformed students nationally.

Comparing 2012 and 2013 Iowa Norms

Overall, the 2013 Iowa norms are very similar to the 2012 Iowa norms, indicating substantial stability in overall achievement during this two-year period.

1. Information from the *Iowa Assessments* allows educators and parents to compare individual or local group performance to the **most current estimate of Iowa and national student performance available based on a highly representative sample**. Link to access Iowa norms for individuals (if you're unable to access, please contact your district master):
<https://itp.education.uiowa.edu/IBCV/auth/obtainstudentIPR/default.aspx>
2. Because achievement of the general school population has improved over the past few years, a student's NPRs based on the 2011 norms and reported for the *Iowa Assessments* may be lower than NPRs reported for the previous edition of the tests. Students taking the *Iowa Assessments* today are being compared to a group of students that, overall, outperformed comparable students during the previous norms period. This is much like running a race against a faster group of runners or comparing a student's height to that of a group of children who are generally taller. Just as the student is not necessarily running slower than before or is now shorter than in the past, student achievement—what the student knows and is able to do in a given subject area—may not have declined. Rather, a student's *relative standing* within a group may have changed.
3. Because each edition of the tests is statistically adjusted to be comparable to previous editions, **the norming group's improved performance on the tests can be attributed to increased student achievement in general and not to a change in the difficulty of the tests**.
4. **The importance of up-to-date normative information is critical in times of change and education reform**. The *Iowa Assessments* reflect today's curricula; they have been carefully designed using the Common Core State Standards (CCSS), individual state standards, surveys of classroom teachers, reviews of curriculum guides and instructional materials, and responses from students in extensive research studies and field testing.
5. **Educators should note that *Iowa Assessments* score reports provide much additional information and other score types, including domain scores, that can help them understand student achievement in each content area. Standard Scores and Grade Equivalent are valuable and important scores that can help monitor student growth.**

2011 National Percentile Rank		Reading Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8		9		10		11	
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90		86	87	85	84	89	89	91	90	88	87	88	87	83	84	83	82	85	84
75		70	71	68	66	71	71	75	73	71	70	72	71	61	61	58	57	61	60
50		43	43	42	41	42	40	52	50	44	43	44	44	31	32	27	26	28	28
25		18	18	18	17	15	14	22	21	19	19	19	19	11	11	9	9	9	9
10		7	7	5	5	4	4	7	7	7	6	6	6	3	3	2	2	2	3

2011 National Percentile Rank		Math Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8		9		10		11	
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90		87	87	88	87	89	88	91	90	88	88	88	87	81	82	83	82	83	83
75		68	68	70	68	72	70	76	75	73	71	70	70	59	60	59	58	55	55
50		37	37	43	42	42	41	48	46	41	42	41	41	29	30	27	27	34	34
25		15	16	17	16	17	16	22	21	16	17	15	15	10	10	9	9	5	5
10		5	5	5	5	6	5	7	7	5	6	5	5	3	3	2	2	1	1

2011 National Percentile Rank		Written Expression Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8		9		10		11	
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90		83	83	83	82	88	87	89	89	85	86	85	85	80	81	80	79	84	83
75		61	62	59	58	68	67	71	71	66	66	68	68	55	56	53	52	59	59
50		32	34	29	29	36	35	41	42	39	40	39	39	25	25	23	24	27	27
25		13	13	9	9	10	10	15	15	14	15	13	14	7	8	7	8	9	9
10		4	4	2	2	2	3	4	4	4	4	3	4	1	2	1	2	2	2

2011 National Percentile Rank		Science Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8		9		10		11	
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90		88	89	86	86	91	91	91	91	91	90	88	88	78	78	79	76	80	79
75		68	69	66	65	73	72	74	74	73	72	68	68	53	53	51	50	52	51
50		38	39	34	34	43	41	45	44	42	41	38	38	24	24	20	21	23	23
25		8	8	11	10	16	15	15	16	14	14	12	12	8	8	7	7	6	7
10		2	2	3	3	4	4	5	5	3	3	3	3	2	2	1	2	1	1

2011 National Percentile Rank		Social Studies Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8		9		10		11	
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90		88	87	84	84	87	86	88	88	85	85	84	84	76	75	74	73	78	77
75		63	65	60	60	68	66	69	68	64	64	64	64	48	48	46	45	50	50
50		35	36	29	28	28	27	38	37	34	34	33	34	20	20	18	18	20	20
25		13	13	9	10	11	11	14	13	12	12	10	10	6	6	6	7	6	6
10		4	5	2	2	2	2	4	4	3	3	2	2	1	1	1	2	2	1

2011 National Percentile Rank		Vocabulary Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8		9		10		11	
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90		85	85	83	82	88	88	87	86	83	82	85	84	83	83	83	81	86	86
75		66	66	65	64	71	70	68	67	64	62	66	63	59	60	59	56	66	64
50		36	36	36	35	37	35	41	40	35	34	35	33	27	28	24	23	32	30
25		14	14	13	12	14	13	15	15	13	13	12	11	8	8	7	7	9	8
10		5	5	3	3	4	3	5	5	4	4	3	3	2	2	2	2	2	2

2011 National Percentile Rank		Spelling Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8							
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013						
90		81	80	85	86	86	86	85	86	84	84	84	84						
75		64	64	67	68	67	68	66	67	64	64	65	65						
50		38	39	39	40	41	41	38	39	37	37	37	37						
25		14	15	17	17	16	16	16	17	16	17	15	15						
10		6	6	6	6	5	5	5	5	5	6	4	4						

2011 National Percentile Rank		Capitalization Corresponding Iowa Percentile Rank Grade Level																	
		3		4		5		6		7		8							
		2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013						
90		83	83	79	80	78	80	77	79	76	77	77	78						
75		63	64	55	56	55	57	55	57	51	52	52	55						
50		36	37	28	30	27	28	28	30	25	26	26	28						
25		14	15	9	11	9	9	9	11	9	10	8	10						
10		5	6	3	4	3	3	3	3	3	3	2	3						

2011 National Percentile Rank	Punctuation Corresponding Iowa Percentile Rank Grade Level															
	3		4		5		6		7		8					
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013				
90	81	82	77	79	78	80	81	82	76	77	79	80				
75	59	61	55	57	53	56	57	59	51	53	53	56				
50	33	35	26	28	26	28	28	30	26	27	25	27				
25	14	15	9	10	8	10	9	11	9	10	7	8				
10	4	5	3	3	2	3	3	3	2	3	2	2				

2011 National Percentile Rank	Computation Corresponding Iowa Percentile Rank Grade Level																	
	3		4		5		6		7		8		9		10		11	
	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013
90	89	89	88	88	88	88	91	91	88	89	87	89	82	84	81	83	84	86
75	72	73	70	71	69	69	75	76	69	73	67	72	59	62	56	59	61	64
50	40	42	43	44	43	44	45	47	39	44	36	42	32	35	27	31	29	34
25	12	14	16	18	17	19	18	20	15	18	13	17	11	13	8	10	9	12
10	2	3	6	6	5	6	5	6	4	5	4	5	3	4	2	3	2	4