

## Interpreting State of Iowa Performance using the *Iowa Assessments*<sup>TM</sup>

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
<b>90</b>	86	87	85	84	89	89	91	90	88	87	88	87	83	84	83	82	85	84	
<b>75</b>	70	71	68	66	71	71	75	73	71	70	72	71	61	61	58	57	61	60	
<b>50</b>	43	43	42	41	42	40	52	50	44	43	44	44	31	32	27	26	28	28	
<b>25</b>	18	18	18	17	15	14	22	21	19	19	19	19	11	11	9	9	9	9	
<b>10</b>	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
<b>90</b>	87	87	88	87	89	88	91	90	88	88	88	87	81	82	83	82	83	83	
<b>75</b>	68	68	70	68	72	70	76	75	73	71	70	70	59	60	59	58	55	55	
<b>50</b>	37	37	43	42	42	41	48	46	41	42	41	41	29	30	27	27	34	34	
<b>25</b>	15	16	17	16	17	16	22	21	16	17	15	15	10	10	9	9	5	5	
<b>10</b>	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
<b>90</b>	83	83	83	82	88	87	89	89	85	86	85	85	80	81	80	79	84	83	
<b>75</b>	61	62	59	58	68	67	71	71	66	66	68	68	55	56	53	52	59	59	
<b>50</b>	32	34	29	29	36	35	41	42	39	40	39	39	25	25	23	24	27	27	
<b>25</b>	13	13	9	9	10	10	15	15	14	15	13	14	7	8	7	8	9	9	
<b>10</b>	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
<b>90</b>	88	89	86	86	91	91	91	91	91	90	88	88	78	78	79	76	80	79	
<b>75</b>	68	69	66	65	73	72	74	74	73	72	68	68	53	53	51	50	52	51	
<b>50</b>	38	39	34	34	43	41	45	44	42	41	38	38	24	24	20	21	23	23	
<b>25</b>	8	8	11	10	16	15	15	16	14	14	12	12	8	8	7	7	6	7	
<b>10</b>	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
<b>90</b>		88	87	84	84	87	86	88	88	85	85	84	84	76	75	74	73	78	77
<b>75</b>		63	65	60	60	68	66	69	68	64	64	64	64	48	48	46	45	50	50
<b>50</b>		35	36	29	28	28	27	38	37	34	34	33	34	20	20	18	18	20	20
<b>25</b>		13	13	9	10	11	11	14	13	12	12	10	10	6	6	6	7	6	6
<b>10</b>		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
<b>90</b>		85	85	83	82	88	88	87	86	83	82	85	84	83	83	83	81	86	86
<b>75</b>		66	66	65	64	71	70	68	67	64	62	66	63	59	60	59	56	66	64
<b>50</b>		36	36	36	35	37	35	41	40	35	34	35	33	27	28	24	23	32	30
<b>25</b>		14	14	13	12	14	13	15	15	13	13	12	11	8	8	7	7	9	8
<b>10</b>		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	
<b>90</b>		81	80	85	86	86	86	85	86	84	84	84	84	
<b>75</b>		64	64	67	68	67	68	66	67	64	64	65	65	
<b>50</b>		38	39	39	40	41	41	38	39	37	37	37	37	
<b>25</b>		14	15	17	17	16	16	16	17	16	17	15	15	
<b>10</b>		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	
<b>90</b>		83	83	79	80	78	80	77	79	76	77	77	78	
<b>75</b>		63	64	55	56	55	57	55	57	51	52	52	55	
<b>50</b>		36	37	28	30	27	28	28	30	25	26	26	28	
<b>25</b>		14	15	9	11	9	9	9	11	9	10	8	10	
<b>10</b>		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