The Common Core State Standards in Mathematics

William McCallum
The University of Arizona

Park City, 5 July 2012
Grade level where different states expected fluency with addition and subtraction of fractions (CSMC)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Addition &amp; Subtraction of Fractions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; grade</td>
<td>2 states</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; grade</td>
<td></td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt; grade</td>
<td>7 states</td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt; grade</td>
<td>22 states</td>
</tr>
<tr>
<td>5&lt;sup&gt;th&lt;/sup&gt; grade</td>
<td>9 states</td>
</tr>
<tr>
<td>6&lt;sup&gt;th&lt;/sup&gt; grade</td>
<td>1 state</td>
</tr>
<tr>
<td>7&lt;sup&gt;th&lt;/sup&gt; grade</td>
<td>1 state</td>
</tr>
<tr>
<td>8&lt;sup&gt;th&lt;/sup&gt; grade</td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td></td>
</tr>
</tbody>
</table>
Design principles

Focus
Coherence
Rigor
Understanding
Fluency
Applications

William McCallum The University of Arizona
The Common Core State Standards in Mathematics
Focus and Coherence in the Path to Algebra

F1 Operations and Algebraic Thinking
F2 Number and Operations—Base Ten
F3 Number and Operations—Fractions

→ Expressions and Equations
→ The Number System
→ Algebra
→ The Number System

K 1 2 3 4 5 6 7 8 High School
In Fall 2011 the committee on Teachers as Professionals (c-TaP) and the Institute for Mathematics & Education (IM&E) launched the Toolkit Project.

One-day toolkits: orientation to the Common Core for teachers, written and delivered by teachers.

Three toolkits, for elementary, middle, and high school.

Providing teachers with the tools to learn more when they go home, and to teach their fellow teachers.
Tools

- Progressions
  (http://ime.math.arizona.edu/progressions/)
- Illustrative Mathematics Project
  (http://illustrativemathematics.org)
- My blog, Tools for the Common Core,
  (http://commoncoretools.wordpress.com)
- Institute for Mathematics & Education
  (http://ime.math.arizona.edu/commoncore/)