Overview
Math Computation (M-COMP)

This Module is designed to accompany

Math Computation (M-COMP)
Practice Exercises

AIMSweb®
Web-Based Software
Training Session Goals

Learn how to administer and score Math Computation measures through applied practice.

• M-COMP Overview
• M-COMP Administration & Scoring Directions
• M-COMP Practice Exercises
Benefits and Purpose of Using AIMSweb®’s M-COMP Measure:

• Early detection of students at risk for math difficulties

• Universal Screening

• Monitoring of progress as early and as frequently as possible to ensure development of critical math computation skills
Benefits and Purpose of Using AIMSweb®’s M-COMP Measure:

• Allow decision making about basic math computation skills growth, regardless of between-school, between-school-district, between-teacher differences in math curriculum.

• Are graded to be of similar difficulty within each grade level set.

• Have pre-reserved passages exclusively for Benchmark.

• Have about 30 alternate forms per grade level for frequent progress monitoring over time without practice effects.
## AIMSweb Math Measures

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Areas Assessed</th>
<th>What Students Do</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Test of Early Numeracy</strong>&lt;br&gt;(TEN)&lt;br&gt;(Grades K-1)</td>
<td>Oral Counting&lt;br&gt;Number Identification&lt;br&gt;Quantity Discrimination&lt;br&gt;Missing Number</td>
<td>Rote count from 1-100&lt;br&gt;Identify random printed #s&lt;br&gt;Demonstrate understanding of number value&lt;br&gt;Demonstrate number sequencing skills</td>
</tr>
<tr>
<td><strong>Math Computation</strong>&lt;br&gt;(M-COMP)&lt;br&gt;(Grades 1-8)</td>
<td>Basic facts and complex computation (±, - , x, ÷) through conversions, fractions, percentages, integers, and exponents</td>
<td>Complete an 8-minute test (Gr. 1-8) (Individual and/or group admin.)</td>
</tr>
<tr>
<td><strong>Math Concepts &amp; Applications</strong>&lt;br&gt;(M-CAP)&lt;br&gt;(Grades 2-8)</td>
<td>Numbers, operations, algebra, geometry, linear equations, more.</td>
<td>Complete an 8 min test (Gr. 2-6)&lt;br&gt;Complete a 10-minute test (Gr. 7-8) (Individual and/or group admin.)</td>
</tr>
</tbody>
</table>
Getting Started with Administering Math Computation (M-COMP)

Planning and Preparation
Setting up Assessment Environment

- Assessment environments are flexible and could include…
  - Individually at a set-aside place in the classroom or building
  - Small or large group administration in classroom or other larger room
Setting up Assessment Environment

• Cautions

  – Proctor carefully to avoid students copying/cheating

  – Ensure student is alert and well for testing
Getting the Necessary Testing Materials

During Benchmark testing for M-COMP you will use a “NEW” probe for fall, winter, and spring.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Fall Benchmark</th>
<th>Winter Benchmark</th>
<th>Spring Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test of Early Numeracy (TEN) (Grades K-1)</td>
<td>Probe 1</td>
<td>Probe 2</td>
<td>Probe 3</td>
</tr>
<tr>
<td>Math Computation (M-COMP) (Grades 1-8)</td>
<td>Probe 1</td>
<td>Probe 2</td>
<td>Probe 3</td>
</tr>
<tr>
<td>Math Concepts &amp; Applications (M-CAP) (Grades 2-8)</td>
<td>Probe 1</td>
<td>Probe 2</td>
<td>Probe 3</td>
</tr>
</tbody>
</table>

You do NOT need to give 3 probes and take the median for any of the Math Measures. They are all one probe each per benchmark window.
BEFORE Testing

Examiners: Tools needed

- Digital Stopwatch (or Timer) preferred
- List of Students to be Tested
- Printed Directions
- Examiner Scoring Key
BEFORE Testing

Students: Tools needed

- Sharp pencils for all students
- Student copies for each student taking M-COMP
- Scratch paper (optional)
BEFORE Testing

Students: Prohibited Items*

- Calculators
- Rulers, Protractors, etc.
- Math-related posters in room
- Texting, phones? (calculating or cheating)

* Except where dictated by a student’s Special Education learning plan / IEP
BEFORE Testing

• IMPORTANT: M-COMP is a standardized test. You must:
  – Administer M-COMP the same way, each time.
  – Adhere to the exact standardized directions at ALL times.
  – Remember it’s about testing, not teaching
  – Never practice the tests nor teach the material to students
  – Do not allow students to pre-read the items, use the probes for practice, or use the probes for review after testing, etc.
  • Avoid creating a practice effect
BEFORE Testing

• IMPORTANT: M-COMP is a standardized test. You must:
  – Ensure you are proctoring the test carefully
  – Encourage students to attempt every item and not to skip ahead or simply cross out more difficult items
  – Stop testing when the 8 minutes has elapsed
Administering M-COMP
During Testing: Administration Directions

- Instructions that are in **bold print** must be read to the students verbatim.

- Instructions that are in *regular print* should not be read to the students.

Say to the students: (See next slide)
“We are going to take an 8-minute math test. Read the problems carefully and work each problem in the order presented, starting at the first problem on the page and working across the page from left to right. Do not skip around.

If you do not understand how to do a problem, mark it with an X and move on. Once you have tried all of the problems in order, you may go back to the beginning of the worksheet and try to complete the problems you marked.

Although you may show your work and use scratch paper if that is helpful for you in working the problems, you may not use calculators or any other aids. Keep working until you have completed all of the problems or I tell you to stop.

Do you have any questions?”

Answer any questions the students may have, then hand the students their probes, and say:

“Here are your tests. Put your name, your teacher’s name, and the date on each page in the space provided, then turn over the test....”
During Testing: Administration Directions

“…do not turn the test back over or start working until I tell you to begin.”

Allow the students time to write their information on the probe, then say:

“Begin.”

If a student asks a question or requests clarification, redirect him or her to the probe and say:

“Read the directions again, and work the problem as best you can. If you still do not understand the problem or are unable to work it, you may move on to the next question.

If you see that a student is skipping ahead without attempting each item, provide the following direction:

“Try to work each problem. Do not skip around.”
During Testing:
Administration Directions

When the 8 minutes have elapsed, say:

“Stop and put down your pencil.”

If a student(s) continues to work, re-state:

“Stop working now and put down your pencil.”

At this time, collect the probe(s) and proceed to scoring.
Scoring M-COMP
Overview of M-COMP Scoring

- User-friendly format

- Answers are either correct or incorrect

- Items are arranged carefully to minimize the tendency for students to skip to the easiest items

- Each item has a weighted value based on item difficulty:
  - Least difficult items: 1 point
  - Medium difficult items: 2 points
  - Most difficult items: 3 points
After Testing: Scoring

- Use the corresponding Answer Key to score
- A student’s answer is compared to the correct answer on the Answer Key
- Circle the value (1,2,3) in the “Correct” column
- There is no partial-credit scoring.
- If the answer is incorrect or not answered, circle the 0 in the “Incorrect” column
- Once each item is scored, sum the value in the “correct” column. The sum is the student’s total score for the probe.
Scoring M-COMP: Incomplete Problems

- Because there is no partial-credit scoring, an incomplete problem is incorrect.

\[
\begin{array}{c}
73 \\
+ 60 \\
\hline
3
\end{array}
\]
Scoring M-COMP: Crossed Out Problems

- If a student shows his or her work, but then crossed or X-ed out the problem without placing the answer in the blank, the item is incorrect.
Scoring M-COMP: Crossed Out Problems

- If the student has crossed or X-ed out the problem, but then returned to the item and placed an answer in the blank, score the item based on whether or not the answer placed in the blank is correct.

4 Solve for x

\[
27 + x = 33 \\
-27 \\
\hline
6
\]

\[
x = 6
\]
Scoring M-COMP: Illegibility

• If the response is hard to read, but can be determined, score the answer as the student intended.
Scoring M-COMP: Reversals and Rotations

- **Reversals**: If a response has a reversed number and it is obvious, but correct, score it as correct.

- **Rotations**: If a response contains the numbers 6 or 9 and these are potentially rotated and the response is currently incorrect, count it as incorrect.
Let’s Practice M-COMP
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Acknowledgements

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