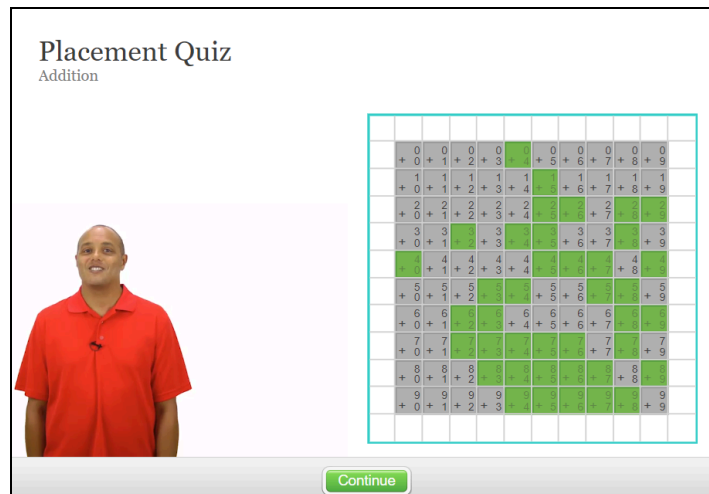


Name & Link to Tech Tool: [XtraMath](#)



Curator: Emily Aron

Brief Description: XtraMath is used for building basic math facts fluency and progress monitoring. There is a set structure and methodology behind the content that is explained within the [FAQ section](#). Students work through the different operations while being timed. Teachers and parents have access to a student's progress.

Technical & Cost considerations: The XtraMath website is free. There is an XtraMath mobile app available on the App Store, Google Play, and Amazon for a few dollars.

Tags:

Math Domain

- Number & Operations

Grade Level

- PreK-2
- 3-5
- 6-8
- 9-12

Tool/Resource Type

- TECH TOOL-Math Specific
- RESOURCE-Math Specific

Evaluation

1. What mathematics is being learned?

Standards

Common Core standards

Fact fluency supports a student's ability to demonstrate the following main headings located in Number & Operations in Base Ten Grades 1-5:

- 1st Grade: Use place value understanding and properties of operations to add and subtract.
- 2nd Grade: Use place value understanding and properties of operations to add and subtract.
- 3rd Grade: Use place value understanding and properties of operations to perform multi-digit arithmetic.

- 4th Grade: Use place value understanding and properties of operations to perform multi-digit arithmetic.
- 5th Grade: Perform operations with multi-digit whole numbers and with decimals to hundredths.

Proficiency Strands

- Procedural Fluency
 - This Tech Tool's focus on fact fluency relates to procedural fluency. Developing fluency in the basic math facts for the four operations is a key part of the elementary math curriculum. It is to the student's benefit that they are able to efficiently and accurately recall these basic facts. As the XtraMath website states, "Quickly recalling math facts, instead of calculating them, frees up mental resources for higher-level operations."
- Productive Disposition
 - When students are fluent in recalling math facts, it makes many more aspects of math more attainable and less of a hurdle. The program also hides a student's mastery score from the student, though a teacher or parent can show the student their score. XtraMath hides it because "students respond differently to seeing their mastery score — some are inspired, but others can become discouraged or frustrated. For this reason we don't show students their mastery scores or the color rating that they received for a session. However, we do give students plenty of feedback, including answer icons and the mastery matrix."

Additional comments on what is being learned:

The XtraMath Tech Tool provides an online platform for students to practice their basic facts in the four operations. Its progress monitoring system is a good tool for students, teachers, and parents to use to track the child's performance and areas for improvement.

2. How is the mathematics represented?

The Tech Tool uses numerical representation of the basic math facts. The fact is presented on the screen using digits and the operation sign. Once completing a problem, a new one appears on the screen until the activity is completed.

3. What role does technology play?

This Tech Tool provides an online platform for students to practice their basic facts in all four operations. Teachers can set up the student accounts for their classroom. By doing this, XtraMath is a useful tool for progress monitoring. The Tech Tool has many metrics for teachers to review to make instructional choices. Students keep the same accounts year to year, so teachers and parents can evaluate progress over time. When a student is completing the problems, they are provided with feedback when an answer is incorrect. There is a timer on the screen to pace a student. XtraMath is a Tech Tool that would be suitable for daily practice at school or at home. For disadvantages, to answer the questions, students need to type the responses on their computer keyboard quickly. This could pose as a challenge for some students. Teachers do have the option to hide the timer if that would be appropriate for the student.

Affordances of Technology for Supporting Learning

- **Computing & Automating** - This Tech Tool provides instant results on the answers a student inputs for the facts. If answered correctly, it proceeds to the next problem. If answered incorrectly, the student is shown the answer and has to type it in before proceeding.
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4. How does the technology fit or interact with the social context of learning?

This Tech Tool is best suited as an independent activity since it carefully measures a student's mastery of the basic facts. Support from others would impact the student's score, making the score not a true reflection of the student's progress.

5. Additional Comments

This Tech Tool is a free online website that measures fluency in the basic facts of all four operations. The advantages of student accounts and progress monitoring over time make it a strong technology to consider for fact fluency practice.