

Common Core Math Fluency

By the end of grade:	Students should be fluent with:
K	Addition/subtraction within 5
1	Addition/subtraction within 10
2	Addition/subtraction within 20* *By end of year, know from memory all sums and differences of two one-digit numbers. Addition/subtraction within 100 (pencil and paper)
3	Multiplication/division facts within 100** **By end of year, know from memory all products of two one-digit numbers (0-9). Addition/subtraction within 1000
4	Addition/subtraction within 1,000,000
5	Multi-digit multiplication
6	Multi-digit division Multi-digit decimal operations

Think of fluency as meaning the same thing as when we say that somebody is fluent in a foreign language: when you're fluent, you flow. Fluent isn't halting, stumbling, or reversing oneself. *Fluent* in the Common Core Standards means "fast and accurate."

It is expected that students perform calculations and solve problems quickly and accurately. The 15 minute fact practice should be used to develop fluency with operations

Daily practice should not always include timed activities; however *assessing* fluency needs to attend to issues of time.

To ensure that students do not become time test anxious or bored, there will be two summative assessments at the end of each quarter. Formative ***timed*** tests should be used **no more than once a month** in grades 2-5.

Take care to formatively assess students in multiple ways, which could include:

- Progress in math games
- Short strategy assessments (doubles, finding 10s, etc)
- Self assessments
- Recording progress on facts (i.e. sorting flashcards into two pile know/don't know)
- Computer games and software
- Basic fact games (BINGO, center activities, etc.)