

Summer

Math

WAYS TO AVOID SUMMER MATH LOSS

- ❖ Highlight math in everyday activities-
going shopping (calculating change,
discounts, total bill), talking about
player stats at sports games, cooking
(doubling or halving recipes)
- ❖ [Read a Math Story Book \(Click me\)](#)
- ❖ Play math games like Yahtzee, Blokus,
Monopoly, and assembling jigsaw
puzzles

Math Fluency

Math Fluency Background Info (click me)

- ❖ Fluency includes accuracy, efficiency, flexibility, and selection of appropriate strategies.
- ❖ **Fluency Develops in Three Phases-** counting, deriving and mastery, as they learn the basic facts in any operation.
- ❖ Instead of using timed tests, teachers should engage students with substantial and enjoyable practice, using games.



Grade Level Standards



Kindergarten: Recognize and describe with fluency part-whole relationships for numbers up to 5



First Grade: Demonstrate fluency with addition and subtraction within 10



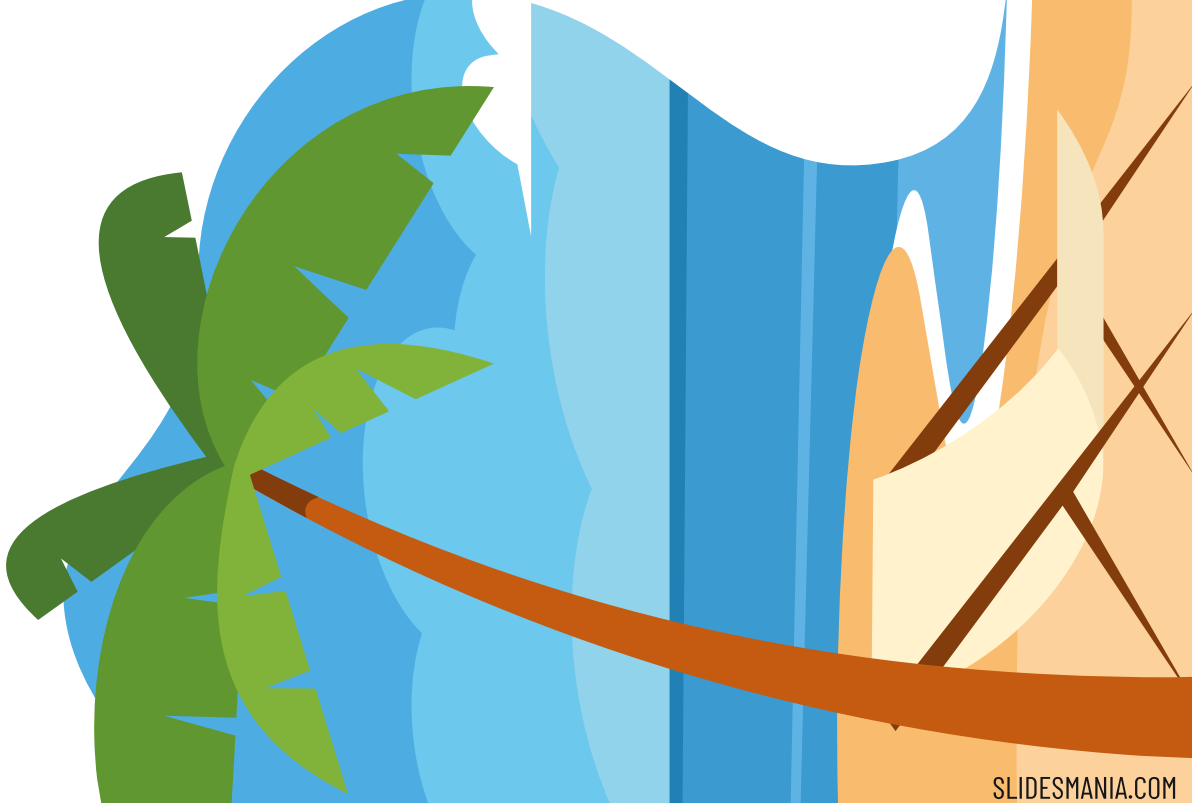
Second Grade: Demonstrate fluency with addition and subtraction within 20



Third Grade: Demonstrate fluency with multiplication facts of 0, 1, 2, 5, and 10



Fourth (and above): Demonstrate fluency with multiplication facts through 12 x 12, and the corresponding division facts



CHARTS, GAMES, AND ACTIVITIES FOR PRACTICE

Foundational Facts Charts - see
slides 6 and 7

Math Fact Fluency Games

Structuring Within 5, 10, and 20

Math Fluency for Families!

ST Math

Foundational Facts for Addition

| | 0, 1, 2 | | | Doubles | | | Combos of 10 | | | Ten Plus | | |
|--------|---------|--------|--------|---------|--------|--------|--------------|--------|--------|----------|--|--|
| 0 + 0 | 0 + 1 | 0 + 2 | 0 + 3 | 0 + 4 | 0 + 5 | 0 + 6 | 0 + 7 | 0 + 8 | 0 + 9 | 0 + 10 | | |
| 1 + 0 | 1 + 1 | 1 + 2 | 1 + 3 | 1 + 4 | 1 + 5 | 1 + 6 | 1 + 7 | 1 + 8 | 1 + 9 | 1 + 10 | | |
| 2 + 0 | 2 + 1 | 2 + 2 | 2 + 3 | 2 + 4 | 2 + 5 | 2 + 6 | 2 + 7 | 2 + 8 | 2 + 9 | 2 + 10 | | |
| 3 + 0 | 3 + 1 | 3 + 2 | 3 + 3 | 3 + 4 | 3 + 5 | 3 + 6 | 3 + 7 | 3 + 8 | 3 + 9 | 3 + 10 | | |
| 4 + 0 | 4 + 1 | 4 + 2 | 4 + 3 | 4 + 4 | 4 + 5 | 4 + 6 | 4 + 7 | 4 + 8 | 4 + 9 | 4 + 10 | | |
| 5 + 0 | 5 + 1 | 5 + 2 | 5 + 3 | 5 + 4 | 5 + 5 | 5 + 6 | 5 + 7 | 5 + 8 | 5 + 9 | 5 + 10 | | |
| 6 + 0 | 6 + 1 | 6 + 2 | 6 + 3 | 6 + 4 | 6 + 5 | 6 + 6 | 6 + 7 | 6 + 8 | 6 + 9 | 6 + 10 | | |
| 7 + 0 | 7 + 1 | 7 + 2 | 7 + 3 | 7 + 4 | 7 + 5 | 7 + 6 | 7 + 7 | 7 + 8 | 7 + 9 | 7 + 10 | | |
| 8 + 0 | 8 + 1 | 8 + 2 | 8 + 3 | 8 + 4 | 8 + 5 | 8 + 6 | 8 + 7 | 8 + 8 | 8 + 9 | 8 + 10 | | |
| 9 + 0 | 9 + 1 | 9 + 2 | 9 + 3 | 9 + 4 | 9 + 5 | 9 + 6 | 9 + 7 | 9 + 8 | 9 + 9 | 9 + 10 | | |
| 10 + 0 | 10 + 1 | 10 + 2 | 10 + 3 | 10 + 4 | 10 + 5 | 10 + 6 | 10 + 7 | 10 + 8 | 10 + 9 | 10 + 10 | | |

Created from: Bay-Williams, J. M., & Kling, G. (2019). *Math fact fluency: 60 games and assessment tools to support learning and retention*. Alexandria, VA: ASCD.

Foundational Facts for Multiplication

| | | |
|------------|-----------|----------------|
| 2s | 5s | 0s |
| 10s | 1s | Squares |

I

| | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| 0 x 0 | 0 x 1 | 0 x 2 | 0 x 3 | 0 x 4 | 0 x 5 | 0 x 6 | 0 x 7 | 0 x 8 | 0 x 9 | 0 x 10 |
| 1 x 0 | 1 x 1 | 1 x 2 | 1 x 3 | 1 x 4 | 1 x 5 | 1 x 6 | 1 x 7 | 1 x 8 | 1 x 9 | 1 x 10 |
| 2 x 0 | 2 x 1 | 2 x 2 | 2 x 3 | 2 x 4 | 2 x 5 | 2 x 6 | 2 x 7 | 2 x 8 | 2 x 9 | 2 x 10 |
| 3 x 0 | 3 x 1 | 3 x 2 | 3 x 3 | 3 x 4 | 3 x 5 | 3 x 6 | 3 x 7 | 3 x 8 | 3 x 9 | 3 x 10 |
| 4 x 0 | 4 x 1 | 4 x 2 | 4 x 3 | 4 x 4 | 4 x 5 | 4 x 6 | 4 x 7 | 4 x 8 | 4 x 9 | 4 x 10 |
| 5 x 0 | 5 x 1 | 5 x 2 | 5 x 3 | 5 x 4 | 5 x 5 | 5 x 6 | 5 x 7 | 5 x 8 | 5 x 9 | 5 x 10 |
| 6 x 0 | 6 x 1 | 6 x 2 | 6 x 3 | 6 x 4 | 6 x 5 | 6 x 6 | 6 x 7 | 6 x 8 | 6 x 9 | 6 x 10 |
| 7 x 0 | 7 x 1 | 7 x 2 | 7 x 3 | 7 x 4 | 7 x 5 | 7 x 6 | 7 x 7 | 7 x 8 | 7 x 9 | 7 x 10 |
| 8 x 0 | 8 x 1 | 8 x 2 | 8 x 3 | 8 x 4 | 8 x 5 | 8 x 6 | 8 x 7 | 8 x 8 | 8 x 9 | 8 x 10 |
| 9 x 0 | 9 x 1 | 9 x 2 | 9 x 3 | 9 x 4 | 9 x 5 | 9 x 6 | 9 x 7 | 9 x 8 | 9 x 9 | 9 x 10 |
| 10 x 0 | 10 x 1 | 10 x 2 | 10 x 3 | 10 x 4 | 10 x 5 | 10 x 6 | 10 x 7 | 10 x 8 | 10 x 9 | 10 x 10 |

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