

# Computational Fluency

**Computational fluency** is defined as having efficient, flexible and accurate methods for computing. Students need to be fluent in mental math, paper and pencil methods and using technology such as a calculator in computing answers to situations involving numbers (both whole numbers as well as fractions and decimals).  
-NCTM, 2000

## ***Computational fluency develops from a strong sense of number.***

(BC Math Curriculum, Big Idea, K-9, 2015)

### **K-9 Big Idea:**

#### ***Computational fluency develops from a strong sense of number***

K: One-to-one correspondence and a sense of 5 and 10 are essential for fluency with numbers.

1: Addition and subtraction with numbers to 10 can be modelled concretely, pictorially, and symbolically to develop computational fluency.

2: Development of computational fluency in addition and subtraction with numbers to 100 requires an understanding of place value.

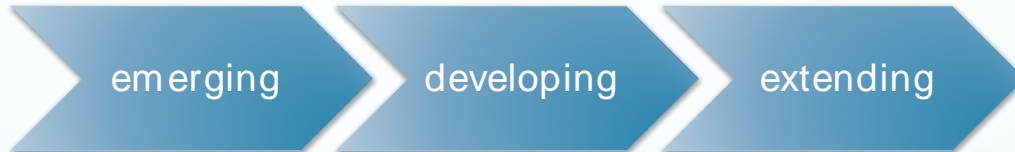
3: Development of computational fluency in addition, subtraction, multiplication and division of whole numbers requires flexible decomposing and composing.

4: Development of computational fluency and multiplicative thinking requires analysis of patterns and relations in multiplication and division.

5: Computational fluency and flexibility with numbers extend to operations with larger (multi-digit) numbers.

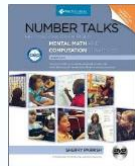
curriculum.gov.bc.ca 2015

# the continuum of computational fluency



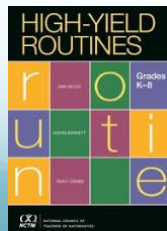
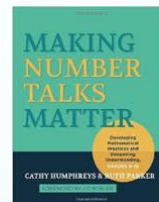
***What does this look like for addition and subtraction?  
What does this look like for multiplication and division?  
What does this look like at your grade level/s?***

## Recommended Resources:



□ Number Talks

□ Making Number Talks Matter



□ High Yield Routines