

#255 Using Mental Math Strategies To Deepen Number Sense

NCTM 2019



Math Champions
Professional Development, LLC



Cassy Turner
Cassy@MathChampions.com

Beth Curran

Beth@MathChampions.com



Why Mental Math

Mental math...

- Develops and solidifies understanding of place value

$$34 \times 40 =$$

- Builds a deep understanding of the distributive property

$$25 \times 16 =$$

- Develops flexibility with numbers

$$49 + 25 =$$

- It's tons of FUN!

Number String

Start with the number of days in a leap year,
subtract the number of months in a year,
subtract the number of days in January, and
add the number of days in a week.

Mental Math Strategies

Make Ten

$7 + 8 =$

$7 + 8 =$

$67 + 8 =$

$67 + 28 =$

$197 + 28 =$

Subtract from a Ten

$$13 - 8 =$$

Double Subtraction

$$13 - 8 =$$

$$43 - 8 =$$

Subtract Using Compensation

$$73 - 38 =$$

$$143 - 98 =$$

Fact Fluency

Fact fluency is the ability to efficiently apply a strategy and/or recall basic facts from memory.

Teach strategies for basic facts. Memorization is not a strategy!

Sample Lesson

List and build the easy facts for multiplying by 8.

Multiply by decomposing

$$48 \times 3 =$$

Multiply by the Closest Ten

$$48 \times 3 =$$

Divide using Multiples

$$51 \div 3 =$$

Use the digits 1-9, not more than once in each equation, to make as many correct equations as possible.

$$\begin{array}{|c|} \hline \square \\ \hline \end{array} \begin{array}{|c|} \hline \square \\ \hline \end{array} + \begin{array}{|c|} \hline \square \\ \hline \end{array} = \begin{array}{|c|} \hline \square \\ \hline \end{array} \begin{array}{|c|} \hline \square \\ \hline \end{array}$$

