“MASTERING” THE BASIC FACTS

Basic facts for addition/multiplication refer to those sums/products where both whole numbers are less than 10 (e.g., $4 + 7 = 11$; $8 \times 5 = 40$). The subtraction/division basic facts refer to those differences/quotients that correspond to addition/multiplication basic facts (e.g., $11 - 4 = 7$; $40 \div 8 = 5$). Mastering a basic fact means being able to provide a quick response without resorting to nonefficient means, such as counting (on fingers).

STEPS FOR HELPING STUDENTS DEVELOP FACT MASTERY

- Develop understanding of the operations and of number relationships
- Develop effective strategies for fact retrieval
- Provide practice in the use of and in the selection of fact retrieval strategies
  - Avoid premature drill
  - Keep drill short
  - Encourage speed in using strategies (answer a bit faster each time)
  - Provide immediate feedback

RETRIEVAL STRATEGIES FOR ADDITION FACTS

- Facts with zero
- Doubles ($4 + 4$)
- Five-Bars ($5 + 1$; $5 + 7 = 5 + 5 + 2$)
- Make-ten facts with 8 or 9 ($6 + 8 = 8 + 2 = 10$ and $10 + 4$ equals ... [6 becomes 2 + 4])
- Make-ten extended with 7 ($4 + 7 = 7 + 3 = 10$ and $10 + 1$ equals ... [4 becomes 3 + 1])
- Doubles plus two or Two-apart facts ($3 + 5 = 3 + 3 + 2$ more)
- Counting On

RETRIEVAL STRATEGIES FOR SUBTRACTION FACTS (Think Addition)

- Facts with zero
- Doubles ($8 - 4$)
- Ten-Frames ($10 - 2$; $10 - 7$)
- Five-Bars ($8 - 5$; $12 - 7$)
- Build-up through ten with 8 or 9 ($15 - 8 = 8 + 2 = 10$ and 5 more is 15 so $15 - 8 = 7$)
- Back down through ten for difference of 8 or 9 ($13 - 3 = 13$ less 3 is 10 less 1 more is 9)
- Extend Think-Addition ($13 - 6 = 6$ plus what will make 13)

RETRIEVAL STRATEGIES FOR MULTIPLICATION FACTS

- Doubles ($2 \times 6$)
- Five Facts
- Zeros and Ones
- Nifty Nines
- Double and double again ($4 \times 6 = 24$)
- Double and one more set ($3 \times 8 = 24$)
- Half then double ($6 \times 7 = 42$)
- Add one more set ($6 \times 7 = 5 \times 7 = 42$)
- Double three times ($7 \times 8 = 56$)

RETRIEVAL STRATEGIES FOR DIVISION FACTS

THINK MULTIPLICATION!!!!

“Near-Facts” when dealing with remainders ($50 \div 7 = 49 \div 7$ with one left over)


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