Unit 5   The Order of Operations

1. Mathematical expressions may involve one or more operations.

   A. Six important math operations are addition, subtraction, multiplication, division, exponents, and roots.

   B. These are math expressions with one operation.

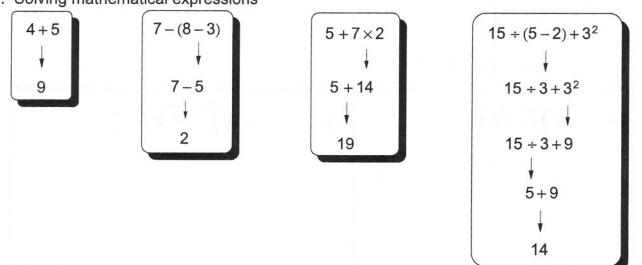 | $4 + 2$ | $6 - 3$ | $(4)(2)$ | $9 \div 3$ | 2^2 | $\sqrt{9}$ |

   C. Order of operations is important when a math expression has more than one operation. When given a choice of two math operations to perform, the **higher order operation is done first. Equal order operations are performed from left to right.**

The Order of Operations			
1st	Operations within parenthesis	**3rd**	Multiplication and Division **(middle order)**
2nd	Exponents and Roots **(highest order)**	**4th**	Addition and Subtraction **(lowest order)**

2. Solving mathematical expressions

$4 + 5$
↓
9

$7 - (8 - 3)$
↓
$7 - 5$
↓
2

$5 + 7 \times 2$
↓
$5 + 14$
↓
19

$15 \div (5 - 2) + 3^2$
↓
$15 \div 3 + 3^2$
↓
$15 \div 3 + 9$
↓
$5 + 9$
↓
14

Unit 5   Practice Problems

Simplify the following expressions:			
1) $8 + 3 - 4$	3) $8 - (6 - 4) + 2$	5) $24 \div (6 - 2)4^2$	6) $(9 - 5) + 16 \div 4$
2) $12 - (6 - 4)$	4) $16 \div 4 \times 2$		