

In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each chapter. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.



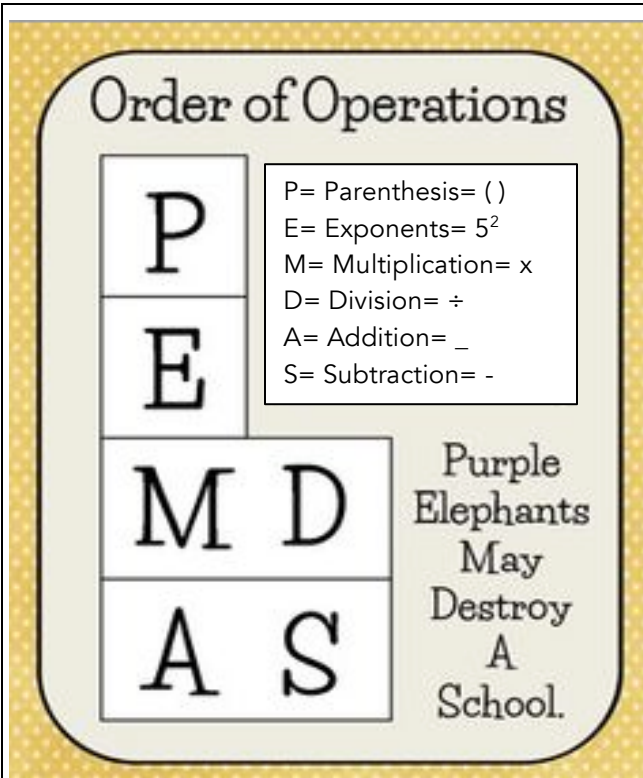
Scan the QR code to check out teaching strategies for this chapter.

In each chapter we will spend time reviewing material taught in prior grades as it relates to the standards being taught in fourth grade. Our goal is to keep a balance of skill based learning along with enhancing our student's ability to problem solve and think conceptually.

<b>Review Material from Prior Grades</b>
<ol style="list-style-type: none"> <li>1) Multiplication and division word problems. (3.OA.9)</li> <li>2) Two-step word problems with all four operations. (3.OA.8)</li> </ol>
<b>New Material for 4<sup>th</sup> Grade</b>
<ol style="list-style-type: none"> <li>1) I can solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations. (4.OA.3)</li> <li>2) I can solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations in which remainders must be interpreted. (4.OA.3)</li> <li>3) I can generate a number or shape pattern that follows a given rule. (4.OA.5)</li> </ol>
<b>End of Chapter Expectations</b>
<ol style="list-style-type: none"> <li>1) Chapter Assessment</li> </ol>

\*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

Strategies for Patterns and Sequences



☺ Family Practice ☺

Check out some of these free, math websites to practice patterns and sequences.

- 1) [http://mrnussbaum.com/grade\\_4\\_standards/](http://mrnussbaum.com/grade_4_standards/)
- 2) <http://www.mathgoodies.com/standards/alignments/grade4.html>

Example:  $(9+1) \div (5-3) \times 4 = 20$

$(9+1) \div (5-3) \times 4 =$ $\uparrow$ $\uparrow$	Because there are <b>parentheses</b> , you will solve them <b>first</b> .
$(9+1) = 10$ and $(5-3)=2$	
$10 \div 2 \times 4$	Once solved, rewrite the new equation.
$10 \div 2 \times 4$ $\longrightarrow$	Now that multiplication and division are left, you will solve the problem working left to right.
$10 \div 2 = 5$	
$5 \times 4 = 20$	Write the new equation and solve.

Pattern Types

Type	Example
even + even = even	Rule: +4 2, 6, 10, 14
odd + odd = even	Rule: +3 5, 8, 11, 14
odd + even = odd	Rule: + 2 5, 7, 9, 11
even x even = even	Rule: x 4 2, 8, 24, 96
odd x odd = odd	Rule: x3 5, 15, 45, 135
even x odd = even	Rule: x3 4, 12, 36, 108

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## Strategies for Patterns and Sequences, Continued

## Input and Output Function Tables

The rule is "Add 6 to a number"

Rule: $x + 6 =$	
X	Y
1	7
2	8
5	11
7	13
9	15

The "X" number is the input. To solve you have to "Add 6" to this number.

The "Y" number is the output. This is the answer to  $X + 6$ .

Each row has an "X" number and a "Y" number

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