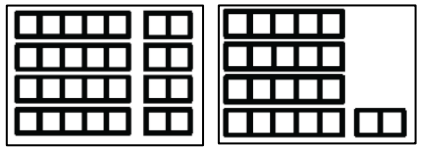
Grade 5

Writing and Interpreting Numerical Expressions

Overarching Student Learning Goals In this unit, your child will work to build an understanding of the following:	Resources/Tasks to support your child at home.
Evaluate expressions using order of operations • Students refine their understanding of working with grouping symbols (parentheses, brackets, or braces) and understand they should work with operations within grouping symbols first $1 + (2 \times 3) = 1 + 6 = 7$ $(1 + 2) \times 3 = 3 \times 3 = 9$ • Students also learn about the conventions of mathematics in regard to an order of working with related operations: work with division and/or multiplication from left to right first, then work with any addition and/or subtraction from left to right • Example: Which model shows using multiplication first to evaluate 4×5+2? • How could we add parentheses to match the other model? 4×(5+2) 	• Florida Student Tutorial: The Great Expression Debate - https://bit.ly/2Sy9iGW • NCTM Game: Primary Krypto - https://bit.ly/2xMNXjB • Khan Academy: Evaluating Expressions with Parentheses - https://bit.ly/2GweEMx • LearnZillion: Work with Expressions that have Parentheses - https://bit.ly/2WK2a9E • Thinking Blocks Game: Operations Exhibit - https://bit.ly/2EuCGqP
Write or identify a numerical expression given a mathematical word phrase • Given a mathematical phrase, such as "the sum of 24 and 36 divided by 3", students can write or identify the matching expression. (24 + 36) ÷ 3 • Example: Write a numerical expression to match the following situation: Jack caught 15 small bass and Darrell caught 12 small bass in a fishing tournament. They threw 5 back into the water. (15 + 12) - 5	• Florida Student Tutorial: Expressions – Not Just for Faces - https://bit.ly/2BhpvX9 • Khan Academy: Constructing Numerical Expressions - https://bit.ly/2GbHX7v • LearnZillion: Write a Numerical Expression to Represent a Description - https://bit.ly/2oMvef2

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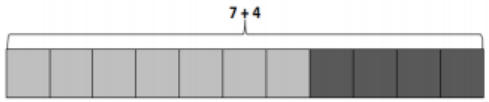
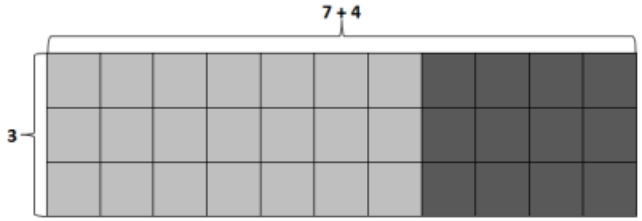
Translate a numerical expression into a mathematical word phrase • Students must also be able to read or translate a numerical expression using mathematical language • Example: (10÷2)-3 can be interpreted as divide 10 by 2, then subtract 3	• Khan Academy: Translating Expressions - https://bit.ly/2SvygGL • LearnZillion: Represent a Real-World Situation with an Expression - https://bit.ly/2DVQmK7 • Real World Situations: Write a numerical expression that represents the situation below: I served 6 tables and received $8 in tips per table, one of the tables gave me an additional $7 for doing such a great job. (6 x 8) + 7
Compare two related expressions without evaluating them • Students can reason and explain how including additional steps might change or affect expressions • Students can reason and compare two related expressions without having to solve • Example: this picture represents 7+4  Draw a picture that represents 3×(7+4) Describe the comparison between 3×(7+4) and 7+4 	• Ask children to compare two related expressions, but without evaluating or solving for the value: *How does the expression 5(10 x 10) relate to 10 x 10?* *Possible response: The expression 5(10 x 10) is 5 times larger than the expression 10 x 10 since I know that I that 5(10 x 10) means that I have 5 groups of (10 x 10).*