

Content Standard	MAFS.5.OA Operations and Algebraic Thinking MAFS.5.OA.1 Write and interpret numerical expressions. MAFS.5.OA.1.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	
Assessment Limits	Whole numbers and simple fraction expressions (single digit denominators, fraction multiplied by a whole number). Expressions should not be more complex than those used in associative or distributive property situations.	
Calculator	No	
Acceptable Response Mechanisms	Equation Response Multiple Choice Response Multi-Select Response Graphic Response – Drag and Drop, Hot Spot	
Context	No context	
Example		
Context	Use two operations inside the grouping symbols. Use more than one set of grouping symbols with one operation inside the grouping symbols. Use only whole numbers. <ul style="list-style-type: none"> Evaluate the expression $6 \times (4 + 3 \times 2) + 100$. Evaluate the expression $(6 + 3) \times (4 + 2)$. 	
Context easier	Use one operation inside the grouping symbols. Use only whole numbers. <ul style="list-style-type: none"> Evaluate the expression $6 \times (4 + 2) + 100$. 	
Context more difficult	Use fractions. Use more than one set of grouping symbols with two operations inside the grouping symbols. <ul style="list-style-type: none"> Evaluate the expression $\frac{1}{2} \times (4 + 8 \times 2) - 9$. Evaluate the expression $(6 + 3 \times 3) - (4 \times 2 + 2)$. 	
Sample Item Stem	Response Mechanism	Notes, Comments
An expression is shown. $6 \times (4 + 2) + 100$ What is the value of the expression?	Equation Response	
An expression is shown. $3 + 8 - 4 \times 2 - 12$ Create an equivalent expression that includes a set of parentheses so that the value of the expression is 2.	Equation Response	
An expression is shown. $6 \times (4 + 2 \times 4) + 10$	Equation Response	

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What is the value of the expression?		
An expression is shown. $\frac{1}{2} \times [4 + 6 \times 3] - 9$ What is the value of the expression?	Equation Response	
A numerical expression is evaluated as shown. $\frac{1}{2} \times \{6 \times 1 + 7\} + 11$ Line 1: $\frac{1}{2} \times \{6 \times 8\} + 11$ Line 2: $\frac{1}{2} \times 48 + 11$ Line 3: $24 + 11$ Line 4: 35 In which line does a mistake first appear? A. Line 1 B. Line 2 C. Line 3 D. Line 4	Multiple Choice Response	