Content Standard	**MAFS.4.OA** *Operations and Algebraic Thinking*
	MAFS.4.OA.1 *Use the four operations with whole numbers to solve problems.*
	MAFS.4.OA.1.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
Assessment Limits	Whole numbers within 100.
	Item must either include a verbal description of an equation of a multiplication equation.
	Multiplication situation must be a comparison, e.g., three times as many.
Calculator	No
Acceptable Response Mechanisms	Equation Response
	Natural Language Response
	Multiple Choice Response
	Multi-Select Response
	Matching Item Response
Context	Allowable

Example	
Context	Items without a context using larger numbers (one double-digit factor).
	Items within a context using smaller numbers (single-digit factors).
Context easier	Items without a context.
	Generally small numbers (single-digit factors).
Context more difficult	Items within a context using larger numbers (one double-digit factor).
	Item requires student to identify multiple versions of the same equation/comparison (12 x 3 = 36, 3 x 12 = 26).

Sample Item Stem	Response Mechanism	Notes, Comments

Select the statement that represents 35 = 5 x 7.
 	
  A. Pat collected 5 cars one year and 7 cars the next year.
  B. Pat collected 5 cars each year for 7 years.
  C. Pat had a collection of 35 cars and gave 7 of them away.
  D. Pat had a collection of 5 cars and increased the number of cars by 35.
	Multiple Choice Response	

Pat has 8 times as many model cars as John. John has 2 model cars. Create a multiplication equation that represents the situation.	Equation Response	

Pat has 12 times as many model cars as John. John has 5 model cars. Select the expression that shows how many cars Pat has.
 	
   o 5 x 12
   o 5 + 12
   o 12 + 5
   o 12(5)
   o 12(12 + 5)
	Multi-Select Response	