



**Common Core Collaborative Cards – Algebraic Thinking
Correlation to the Common Core State Standards**

CARDS									
1 – 4	5 – 8	9 – 12	13 – 16	17 – 20	21 – 24	25 – 28	29 – 32	33 – 36	

Grade 3 Deck

Represent and solve problems involving multiplication and division.

3.OA.1.	Interpret products of whole numbers.			x					
3.OA.2.	Interpret whole-number quotients of whole numbers.			x			x		
3.OA.3.	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	x	x	x					
3.OA.4.	Determine the unknown whole number in a multiplication or division equation relating three whole numbers.		x			x			

Understand properties of multiplication and the relationship between multiplication and division.

3.OA.5.	Apply properties of operations (Commutative, Associative, Distributive) as strategies to multiply and divide.		x		x		x		x
3.OA.6.	Understand division as an unknown-factor problem.						x		

Multiply and divide within 100.

3.OA.7.	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.					x		x	
---------	--	--	--	--	--	---	--	---	--

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

3.OA.8.	Solve two-step word problems (involving whole numbers and not involving parentheses) using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	x					x		x
3.OA.9.	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.								



**Common Core Collaborative Cards – Algebraic Thinking
Correlation to the Common Core State Standards**

CARDS									
1 – 4	5 – 8	9 – 12	13 – 16	17 – 20	21 – 24	25 – 28	29 – 32	33 – 36	

Grade 4 Deck

Use the four operations with whole numbers to solve problems.

4.OA.1.	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ 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.	x	x			x			
4.OA.2.	Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	x	x	x			x	x	
4.OA.3.	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.				x	x	x		x

Gain familiarity with factors and multiples.

4.OA.4.	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.	x	x		x	x		x	
---------	--	---	---	--	---	---	--	---	--

Generate and analyze patterns.

4.OA.5.	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.		x		x	x		x	
---------	--	--	---	--	---	---	--	---	--



**Common Core Collaborative Cards – Algebraic Thinking
Correlation to the Common Core State Standards**

CARDS									
1 – 4	5 – 8	9 – 12	13 – 16	17 – 20	21 – 24	25 – 28	29 – 32	33 – 36	

Grade 5 Deck

Understand the place value system.

5.OA.1.	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	x	x		x	x	x	x	x	x
5.OA.2.	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	x		x				x	x	x

Analyze patterns and relationships.

5.OA.3.	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.		x	x	x	x	x			x
---------	--	--	---	---	---	---	---	--	--	---