



# Arizona's Common Core Standards Mathematics

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Crosswalks: ACCS / 2008

First Grade

**ARIZONA DEPARTMENT OF EDUCATION**  
High Academic Standards for Students  
State Board Approved June 2010  
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Arizona’s Common Core Crosswalks- Mathematics-First Grade

Operations and Algebraic Thinking (OA)				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
<b>Represent and solve problems involving addition and subtraction.</b>	1.OA.A.1	Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. (See Glossary, Table 1.)	M01-S1C2-01	Solve contextual problems using multiple representations for addition and subtraction facts.
			M01-S1C2-04	Create word problems based on addition and subtraction facts. (Extends beyond expectations of the 2010 Mathematics Standards by creating word problems)
	1.OA.A.2	Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.	M01-S3C3-03	Represent a word problem requiring addition or subtraction facts using an equation.
			M01-S1C2-01	Solve contextual problems using multiple representations for addition and subtraction facts. (Does not specifically state 3 whole numbers)
		M01-S3C3-03	Represent a word problem requiring addition or subtraction facts using an equation. (Does not specifically state 3 whole numbers)	
<b>Understand and apply properties of operations and the relationship between addition and subtraction.</b>	1.OA.B.3	Apply properties of operations as strategies to add and subtract. <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i> Students need not use formal terms for these properties.	M01-S1C2-05	Apply properties to solve addition/subtraction problems <ul style="list-style-type: none"> <li>• identity property of addition/subtraction and</li> <li>• commutative property of addition.</li> </ul>



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Understand and apply properties of operations and the relationship between addition and subtraction.	1.OA.B.3	Apply properties of operations as strategies to add and subtract. <i>Examples: If <math>8 + 3 = 11</math> is known, then <math>3 + 8 = 11</math> is also known. (Commutative property of addition.) To add <math>2 + 6 + 4</math>, the second two numbers can be added to make a ten, so <math>2 + 6 + 4 = 2 + 10 = 12</math>. (Associative property of addition.)</i> Students need not use formal terms for these properties.	M02-S1C2-08	Apply properties to solve addition/subtraction problems <ul style="list-style-type: none"> <li>identity property of addition/subtraction,</li> <li>commutative property of addition, and</li> <li>associative property of addition.</li> </ul>
	1.OA.B.4	Understand subtraction as an unknown-addend problem. <i>For example, subtract <math>10 - 8</math> by finding the number that makes 10 when added to 8.</i>	M01-S1C2-03	Develop and use multiple strategies for addition facts to 10+10 and their related subtraction facts.
Add and subtract within 20.	1.OA.C.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).	M01-S1C2-02	Demonstrate addition and subtraction of numbers that total less than 100 by using various representations that connect to place value concepts.
			M01-S1C2-03	Develop and use multiple strategies for addition facts to 10+10 and their related subtraction facts.
	1.OA.C.6	Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$ ); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$ ); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$ , one knows $12 - 8 = 4$ ); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$ ).	M01-S1C2-02	Demonstrate addition and subtraction of numbers that total less than 100 by using various representations that connect to place value concepts. (Extends beyond 20)
			M01-S1C2-03	Develop and use multiple strategies for addition facts to 10+10 and their related subtraction facts.
		M01-S3C3-01	Record equivalent forms of whole numbers to 100 by constructing models and using numbers.	



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Operations and Algebraic Thinking (OA)				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
Work with addition and subtraction equations.	1.OA.D.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? $6 = 6$ , $7 = 8-1$ , $5+2 = 2+5$ , $4+1 = 5+2$ .	M00-S3C3-02	Compare expressions using spoken words and the symbol $=$ . (Extends beyond 2010 mathematics Standards by including spoken words)
			M01-S3C3-02	Compare expressions using spoken words and the symbols $=$ and $\neq$ . (Extends to include spoken words)
	1.OA.D.8	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$ , $5 = \square - 3$ , $6 + 6 = \square$ .	M01-S3C3-03	Represent a word problem requiring addition or subtraction facts using an equation. (Focuses on word problems)



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Number and Operations in Base Ten – (NBT)				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
Extend the counting sequence.	1.NBT.A.1	Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.	M01-S1C1-01	Express whole numbers 0 to 100, in groups of tens and ones using and connecting multiple representations.
			M01-S1C1-02	Count forward to 100 and backward from 100 by 1s and 10s using different starting points, and count forward to 100 by 2s and 5s.
Understand place value.	1.NBT.B.2	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:		
		a. 10 can be thought of as a bundle of ten ones—called a “ten.”	M01-S1C1-01	Express whole numbers 0 to 100, in groups of tens and ones using and connecting multiple representations.
		b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.	M01-S1C1-01	Express whole numbers 0 to 100, in groups of tens and ones using and connecting multiple representations. (Extends beyond 20)
	c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).	M01-S1C1-01	Express whole numbers 0 to 100, in groups of tens and ones using and connecting multiple representations.	
	1.NBT.B.3	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$ , $=$ , and $<$ .	M01-S1C1-04	Compare and order whole numbers through 100 by applying the concepts of place value.
Use place value understanding and properties of operations to add and subtract.	1.NBT.C.4	Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	M01-S1C2-02	Demonstrate addition and subtraction of numbers that total less than 100 by using various representations that connect to place value concepts.



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<b>Number and Operations in Base Ten – (NBT)</b>				
<b>CLUSTER</b>	<b>ACCS</b>	<b>ITEM DESCRIPTION</b>	<b>2008 PO</b>	<b>ITEM DESCRIPTION</b>
			M01-S1C2-03	Develop and use multiple strategies for addition facts to 10+10 and their related subtraction facts.
	1.NBT.C.5	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	M01-S1C1-03	Identify numbers which are 10 more or less than a given number to 90. (Explicitly included in examples in grade level document)
	1.NBT.C.6	Subtract multiples of 10 in the range 10–90 from multiples of 10 in the range 10–90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	M01-S1C2-02	Demonstrate addition and subtraction of numbers that total less than 100 by using various representations that connect to place value concepts. (Extends to subtraction of all numbers to 100)
			M01-S1C2-03	Develop and use multiple strategies for addition facts to 10+10 and their related subtraction facts.



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Measurement and Data – (MD)				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
Measure lengths indirectly and by iterating length units.	1.MD.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object.	M01-S4C4-01	Compare and order objects according to length, capacity, and weight. (Extends beyond length)
	1.MD.A.2	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i>	M00-S4C4-02	Use the attribute of length to describe and compare objects using non-standard units. (Is not limited to contexts as specified)
Tell and write time. Represent and interpret data.	1.MD.B.3	Tell and write time in hours and half-hours using analog and digital clocks.	M02-S4C4-01	Tell time to the nearest minute using analog and digital clocks. (Includes to the nearest minute; writing is not addressed)
	1.MD.B.4	Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	M01-S2C1-01	Collect, record, organize, and display data using tally charts or pictographs.
			M01-S2C1-02	Ask and answer questions by interpreting simple displays of data, including tally charts or pictographs.



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Geometry – (G)				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
Reason with shapes and their attributes.	1.G.A.1	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	M01-S4C1-01	Identify and draw 2-dimensional geometric figures based on given attributes regardless of size or orientation.
			M01-S4C1-02	Compare and sort basic 2-dimensional figures (including irregular figures) using attributes and explain the reasoning for the sorting.
	1.G.A.2	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape. (Students do not need to learn formal names such as “right rectangular prism.”)	M01-S4C1-03	Describe the results of composing and decomposing 2-dimensional figures. (Limited to 2-dimensional)
	1.G.A.3	Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i> , <i>fourths</i> , and <i>quarters</i> , and use the phrases <i>half of</i> , <i>fourth of</i> , and <i>quarter of</i> . Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.	*	



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Standards for Mathematical Practice – (MP)				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
	1.MP.1	Make sense of problems and persevere in solving them.	M01-S5C2-01	Identify the question(s) asked and any other questions that need to be answered in order to find a solution.
			M01-S5C2-02	Identify the given information that can be used to find a solution.
			M01-S5C2-03	Select from a variety of problem-solving strategies and use one or more strategies to arrive at a solution.
			M01-S5C2-04	Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.
			M01-S5C2-05	Explain and clarify mathematical thinking.
			M01-S5C2-06	Determine whether a solution is reasonable.
	1.MP.2	Reason abstractly and quantitatively.	M01-S5C2-05	Explain and clarify mathematical thinking.
	1.MP.3	Construct viable arguments and critique the reasoning of others.	M01-S5C2-05	Explain and clarify mathematical thinking.
	1.MP.4	Model with mathematics.	M01-S5C2-03	Select from a variety of problem-solving strategies and use one or more strategies to arrive at a solution.
			M01-S5C2-04	Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.
	1.MP.5	Use appropriate tools strategically.	M01-S1C3-01	Use estimation to determine if sums are more or less than 5, more or less than 10, or more or less than 20.
			M01-S5C2-03	Select from a variety of problem-solving strategies and use one or more strategies to arrive at a solution.
			M01-S5C2-06	Determine whether a solution is reasonable.
	1.MP.6	Attend to precision.	M01-S5C2-05	Explain and clarify mathematical thinking.
1.MP.7	Look for and make use of structure.	M01-S5C2-05	Explain and clarify mathematical thinking.	
1.MP.8	Look for and express regularity in repeated reasoning.	M01-S1C3-01	Use estimation to determine if sums are more or less than 5, more or less than 10, or more or less than 20.	
		M01-S5C2-06	Determine whether a solution is reasonable.	



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Removed or Moved 2008 Performance Objectives				
CLUSTER	ACCS	ITEM DESCRIPTION	2008 PO	ITEM DESCRIPTION
		REMOVED	M01-S1C1-05	Recognize and compare ordinal numbers, first through tenth.
		REMOVED	M01-S2C3-01	Use Venn diagrams to sort, classify, and count objects and justify the sorting rule.
		REMOVED	M01-S3C1-01	Recognize, describe, extend, create, and record repeating patterns.
		REMOVED	M01-S3C1-02	Recognize, describe, extend, create, and record growing patterns.
	2.MD.9	MOVED TO GRADE 2	M01-S4C4-02	Measure and compare the length of objects using the benchmark of one inch.
		REMOVED	M01-S4C4-03	Sequence the days of the week and the months of the year.