

## **Mathematics Curriculum**



**GRADE K • MODULE 4** 

## Topic B Decompositions of 6, 7, and 8 into Number Pairs

**K.OA.3**, K.OA.1, K.OA.4

	using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ).
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GPK-M5	Addition and Subtraction Stories and Counting to 20
5 G	PK-M5

Topic B advances the work of Topic A, building students' skill with number pairs for 6, 7, and 8, which is cultivated and maintained throughout Topics B and C during Fluency Practice. In the first three lessons of this topic, students decompose 6, 7, and 8. These decompositions are modeled as *put together* situations and represented as addition expressions ( $C = \_\_ + \_\_$ ), as opposed to the *take from* decomposition type ( $C - B = \_\_$ ), which is taught in Topic D.

Lessons 7–9 provide intensive work with decomposing 6, 7, and 8 into number pairs. Students identify all of the pairs using story situations, objects, sets, arrays, and numerals.

In Lessons 10 and 11, students use linking cube sticks to again model the decompositions of 6, 7, and 8 to explore the patterns that emerge (pictured below). Throughout, they work with different configurations of the number bond model to support flexible thinking while moving from parts to whole and whole to parts: composition to decomposition.

6 is 5 and 1.
6 is 4 and 2.
6 is 3 and 3.
6 is 2 and 4.
6 is 1 and 5.



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5 + n Pattern to 8

By the end of this topic, students should have a solid understanding of the relationships between numbers 1–8 and be ready for more formal work with addition and subtraction. Due to the length of this module, there is the option to take a day and a half to administer Topics A and B of the Mid-Module Assessment at the end of Lesson 12. This helps identify students who may need more support and allow more time to reassess these students throughout the module.

A Teaching Sequence Toward Mastery of Decompositions of 6, 7, and 8 into Number Pairs		
Objective 1:	Model decompositions of 6 using a story situation, objects, and number bonds. (Lesson 7)	
Objective 2:	Model decompositions of 7 using a story situation, sets, and number bonds. (Lesson 8)	
Objective 3:	Model decompositions of 8 using a story situation, arrays, and number bonds. (Lesson 9)	
Objective 4:	Model decompositions of 6–8 using linking cube sticks to see patterns. (Lesson 10)	
Objective 5:	Represent decompositions for 6–8 using horizontal and vertical number bonds. (Lesson 11)	
Objective 6:	Use 5-groups to represent the 5 + <i>n</i> pattern to 8. (Lesson 12)	



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**Topic B**