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GRADE

Mathematics Curriculum

Topic B
Division as an Unknown Factor Problem

3.OA.2, 3.OA.6, 3.OA.3, 3.OA.4

Focus Standard:	3.OA.2	Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
	3.OA.6	Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*
Instructional Days:	3	
Coherence -Links from:	G2–M6	Foundations of Multiplication and Division
-Links to:	G4–M3	Multi-Digit Multiplication and Division

The study of factors links Topics A and B. Topic B extends the study to division. Students continue to use a variety of factors in this topic as the emphasis in these lessons rests on conceptually understanding division and learning to interpret problems by writing division equations. Students understand division as an unknown factor problem, and in Lessons 4 and 5, they relate the meaning of the unknown in division to the size of groups and the number of groups, respectively. They work through word problems that help give meaning through context and then analyze more abstract drawings.

In Lesson 6, students explore division in the context of the array model, interpreting arrays by writing division equations. Through the array, students relate the unknown factor in multiplication to the quotient in division. They use arrays to write multiplication equations and find unknown factors, then write division equations where the quotient represents the same as the unknown factor. By the end of this topic, students use the vocabulary terms *quotient* and *unknown factor,* and discussion moves toward solidifying understanding of the relationship between multiplication and division.

A Teaching Sequence Toward Mastery of Division as an Unknown Factor Problem

Objective 1: Understand the meaning of the unknown as the size of the group in division. (Lesson 4)

Objective 2: Understand the meaning of the unknown as the number of groups in division. (Lesson 5)

Objective 3: Interpret the unknown in division using the array model. (Lesson 6)