



Topic D

Decimal Multi-Digit Multiplication

5.3A, 5.3B, 5.3D, 5.3E, 5.4E, 5.4F

Focus Standards:	5.3A	Estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division.
	5.3B	Multiply with fluency a three-digit number by a two-digit number using the standard algorithm.
	5.3D	Represent multiplication of decimals with products to the hundredths using objects and pictorial models, including area models.
	5.3E	Solve for products of decimals to the hundredths, including situations involving money, using strategies based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers.
Instructional Days:	3	
Coherence	-Links from: G5–M1	Place Value and Decimal Fractions
	-Links to: G5–M4	Multiplication and Division of Fractions and Decimal Fractions
	G6–M2	Arithmetic Operations Including Division of Fractions

Throughout Topic D, students make connections between what they know of whole number multiplication to its parallel role in multiplication with decimals by using place value to reason and make estimations about products (**5.3D**, **5.3E**). Knowledge of multiplicative patterns from Grade 4 experiences provide support for converting decimal multiplication to whole number multiplication. (**5.3B**) Students reason about how products of such converted cases must be adjusted through division, giving rise to explanations about how the decimal must be placed.

A Teaching Sequence Toward Mastery of Decimal Multi-Digit Multiplication

Objective 1: Multiply decimal fractions with tenths by multi-digit whole numbers using place value understanding to record partial products.
(Lesson 14)

Objective 2: Multiply decimal fractions by multi-digit whole numbers through conversion to a whole number problem and reasoning about the placement of the decimal.
(Lesson 15)

Objective 3: Reason about the product of a whole number and a decimal with hundredths using place value understanding and estimation.
(Lesson 16)