

Grade 6 Topic 08 - Multiplying Fractions and Mixed Numbers

Content Area: **Mathematics**

Course(s):

Time Period: **Week1**

Length: **1 Week**

Status: **Published**

Stage 1: Desired Results

Unit Overview/ Rationale

Standards & Indicators

MA.5.5.NF.B.4a

Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$.

Big Ideas - Students will understand that...

Operations Meanings and Relationships – There are multiple interpretations of addition, subtraction, multiplication, and division of rational numbers and each operation is related to other operations.

Estimation – Numbers can be approximated by numbers that are close. Numerical calculations can be approximated by replacing numbers with other numbers that are close and easy to compute with mentally. Some measurements can be approximated using known referents as the unit in the measurement process.

Basic facts and Algorithms – There is more than one algorithm for each of the operations with rational numbers. Some strategies for basic facts and most algorithms for operations with rational numbers, both mental math and paper/pencil, use equivalence to transform calculations into simpler ones.

Practices, Processes and Proficiencies – Mathematics content and practices can be applied to solve problems.

Essential Questions - What provocative questions will foster inquiry and transfer of learning

What are standard procedures for estimating and finding products of fractions and mixed numbers?

Content - Students will know...

Skills - Students will be able to...

Use different methods to multiply fractions by whole numbers.

Use compatible numbers and rounding to estimate with fractions.

Find the product of two fractions.

Find the product of two mixed numbers.

Solve multiple-step word problems.

Stage 2: Assessment Evidence

Assessment

Stage 3: Learning Plan

Learning Activities

Use counters to multiply a fraction and a whole number.

Use compatible numbers to estimate the product of a fraction and a whole number.

Use models and computation to find the product of two fractions.

Multiply mixed numbers using improper fractions.

Write and solve problems with hidden questions.

Resources

Two-Color Counters (or Teaching Tool 19), 20 per group