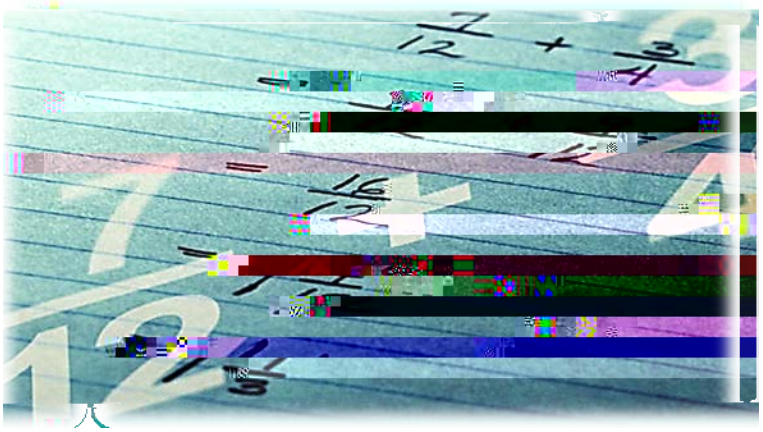
EAST ISLIP SCHOOL DISTRICT

A Story of Units
Parent Handbook



Grade 5
Module 2

Grade 5 • Module 2

In Module 1, students explored the relationships of adjacent units on the place value chart to generalize whole number algorithms to decimal fraction operations. In Module 2, students apply the patterns of the base ten system to mental strategies and the multiplication and division algorithms.

Topics A through D provide a sequential study of multiplication. To link to prior learning and set the foundation for understanding the standard multiplication algorithm, students begin at the concrete–pictorial level in Topic A. They use number disks to model multi-digit multiplication of place value units, e.g., 42 × 10, 42 × 100, 42 × 1,000, leading to problems such as 42 × 30, 42 × 300 and 42 × 3,000 (,). They then round factors in Lesson 2 and discuss the reasonableness of their products. Throughout Topic A, students evaluate and write simple expressions to record their calculations using the associative property and parentheses to record the relevant order of calculations ( ).

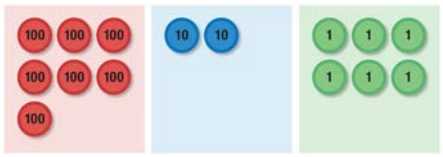
In Topic B, place value understanding moves toward understanding the distributive property via area diagrams which are used to generate and record the partial products (,) of the standard algorithm ( ). Topic C moves students from whole numbers to multiplication with decimals, again using place value as a guide to reason and make estimations about products ( ). In Topic D, students explore multiplication as a method for expressing equivalent measures. For example, they multiply to convert between meters and centimeters or ounces and cups with measurements in both whole number and decimal form ( ).

Topics E through H provide a similar sequence for division. Topic E begins concretely with number disks as an introduction to division with multi-digit whole numbers ( ).

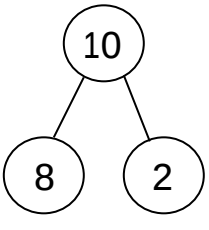
In the same lesson, 420 ÷ 60 is interpreted as 420 ÷ 10 ÷ 6. Next, students round dividends and two-digit divisors to nearby multiples of 10 in order to estimate single-digit quotients (e.g., 431 ÷ 58 ≈ 420 ÷ 60 = 7) and then multi-digit quotients. This work is done horizontally, outside the context of the written vertical method. The series of lessons in Topic F leads students to divide multi- -tipw(e)0.7(w)-1.9(o)]TJ 0 2-1.8w

word problems using multi-digit division with unknowns representing either the group size or number of groups. In this topic, an emphasis on checking the reasonableness of their answers draws on skills learned throughout the module, including refining their knowledge of place value, rounding, and estimation.

- Decimal Fraction (a proper fraction whose denominator is a power of 10)
- Multiplier (a quantity by which a given number—a multiplicand—is to be multed *f*



Unit form modeled with number disks:
7 hundreds 2 tens 6 ones = 72 tens 6 ones



Number bond