

Wy'East Math 3 Report Benchmarks

The following benchmarks offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. *Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.*

Operations & Algebraic Thinking
Represents and solves problems involving multiplication and division.
Understands properties of multiplication and the relationship between multiplication and division.
Solves multiplication and division problems within 100.
Demonstrates fluency in recall of basic facts.
Uses strategies to solve multiplication facts (e.g., $4 \times 6 = 2 \times 6 + 2 \times 6$).
Solves for unknown in a multiplication or division equation (e.g., $3 \times ? = 12$ or $15 / ? = 3$).
Solves division problem by finding an unknown factor.
Uses properties of operations to solve multiplication problems (e.g., $4 \times 60 = 4 \times (6 \times 10) = (4 \times 6) \times 10 = 240$).
Solves addition, subtraction, multiplication, and division story problems that requires more than one step, chooses or writes an equation to represent the problem.
Solves problems involving four operations.
Identifies and explains patterns in arithmetic among basic addition, subtraction and multiplication facts.
Number & Operations in Base Ten
Adds and subtracts 2 and 3-digit numbers using at least two different strategies.

Rounds numbers to the nearest 10 or the nearest 100.
Multiplies 1 digit numbers by multiples of 10.
Number & Operations - Fractions
Locates and places fractions correctly on a number line.
Recognizes and generates equivalent fractions (e.g., $1/2 = 2/4$).
Compares fractions.
Measurement & Data
Tells and writes time to the minute on analog and digital clocks.
Estimates and measures liquid volumes and masses in metric units.
Solves story problems involving time, liquid volumes, masses of objects, and money.
Represent and interpret data – Constructs and reads graphs, and answers questions about the data.
Understands concept of area and relates area to multiplication and to addition.
Distinguishes between and calculates perimeter and area.
Geometry
Divides shapes into parts with equal areas; identifies the area of each part as a fraction of the whole shape.
Identifies and classifies different kinds of quadrilaterals.
Sorts and classifies shapes.

Wy'East Math 4 Report Benchmarks

Operations & Algebraic Thinking
Uses the four operations with whole numbers to solve multi-step story problems including multiplicative comparisons.
Writes equations with a letter standing for the unknown quantity to represent multi-step story problems.
Understands factors and multiples (e.g., 1, 2, 4, 5, 10 and 20 are all factors of 20, and 20 is a multiple of each of those numbers).
Determines whether a number is prime or composite - understanding that a prime has only 2 factors 1 and itself.
Uses mental math, estimation, or rounding to determine whether or not answers to multi-step story problems are reasonable.
Generate and analyze pattern in sequence of numbers or shapes that follow a given rule.
Knows multiplication facts 10×10 , and can easily solve related division facts through $100/10$.
Number & Operations in Base Ten
Generalizes place value understanding for multi-digit whole numbers
a. reads, writes, and compares multi-digit numbers
b. rounds multi-digit numbers to any place
Use place value understanding and properties of operation to perform multi-digit arithmetic
a. adds and subtracts multi-digit numbers using the standard algorithm, as well as other efficient methods
b. multiplies 2- and 3- digit numbers by 1-digit numbers; uses equations or labeled sketches to explain strategies
c. multiplies 2-digit numbers by 2-digit numbers; uses equations or labeled sketches to explain strategies
d. divides 2-digit by 1-digit numbers; uses equations or labeled sketches to explain strategies

Number & Operations - Fractions

Uses a visual model to explain why one fraction is equivalent to another.

Compares two fractions and explains why one fraction (with different numerators and denominators) must be greater than or less than another fraction.

Writes an equation to show a fraction as the sum of other fractions with the same denominator (eg. $\frac{5}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$).

Adds and subtracts fractions and mixed numbers with like denominators.

Multiplies a fraction by a whole number (e.g. $\frac{1}{4} \times 5$).

Solves story problems that involve adding and subtracting fractions with like denominators, multiplying a whole number by a fraction.

Build fractions from unit fractions by applying and extending previous understanding of operations of whole numbers.

Understand decimal notation for fractions, and compare decimal fractions.

Converts a fraction with 10 in the denominator to a fraction with 100 in the denominator, and uses the strategy to add tenths and hundredths.

Measurement & Data

Knows the relative sizes of measurement units within one system of units, including metric length, metric mass, and customary weight, metric volume, and time.

Solves problems involving measurement and conversions of measurements from a larger unit to a smaller unit (e.g. 5 kilograms = 5,000 grams).

Uses the four operations (+, -, x, /) to solve story problems involving distance, intervals of time, liquid volumes, masses of objects, and money.

Uses the formulas for area and perimeter of a rectangle to solve problems.

Represents and interprets data.
Geometric measurement: understands the concepts of angle and measures and sketches angles using a protractor.
Geometry
Draws and identifies lines and angle (points, lines, line segments, rays, angles, and perpendicular and parallel lines) in two-dimensional figures.
Classifies shapes by properties of their lines and angles.
Identifies and draws lines of symmetry; identifies figures with line symmetry.