

NY-6.NS

The Number System

Compute fluently with multi-digit numbers and find common factors and multiples.

2. Fluently divide multi-digit numbers using a standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation.
4. Find the greatest common factor of two whole numbers less than or equal to 100. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor other than 1.

Find the least common multiple of two whole numbers less than or equal to 12.

Coherence: NY-5.NBT.6 → NY-6.NS.2

Coherence: NY-5.NBT.5 → NY-6.NS.3 → NY-7.NS.3
NY-5.NBT.7

Coherence: NY-4.OA.4 → NY-6.NS.4

e.g., Express $36 + 8$ as $4(9 + 2)$.

Note on *Fluency with Procedures*:

- Fluency with procedures (procedural fluency)* means students are accurate, efficient, flexible, and know when and how to use them appropriately. Developing fluency requires understanding why and how a procedure works. Understanding makes learning procedures easier, less susceptible to common errors, less prone to forgetting, and easier to apply in new situations. Students also need opportunities to practice on a moderate number of carefully selected problems after they have established a strong conceptual foundation of the mathematical basis for the procedure.^{.(12),(13)} For more on developing procedural fluency, see [Adding it Up](#), pp. 121-124.

Within-Grade Connections:

- Students use their skill in recognizing common factors (NY-6.NS.4) to rewrite expressions (NY-6.EE.3).^{.(14)}

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The Number System

Apply and extend previous understandings of numbers to the system of rational numbers.

5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values. Use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

Coherence: NY-6.NS.5 → NY-7.NS.1

e.g., temperature above/below zero, elevation above/below sea level, debits/credits, positive/negative electric charge