



# Mathematics - Grade 2

## 2024 - 2025

Students working at grade-level expectations will achieve the following learning objectives:

Number
Review from Grade 1: Fluency with addition and subtraction up to 100, both with and without crossing the tens boundary.
Read, write, and model numbers up to 1,000 using the base-10 system, including understanding place value and using number lines.
Distinguish the difference between value and digit (e.g., in the number 352, the digit 3 represents a value of 300).
Count, compare, and order numbers up to 100 using the symbols =, ≠, <, and >.
Estimate quantities up to 1,000, including rounding to the nearest hundred places.
Reasonably estimate answers using rounding and approximation.
Use doubling and halving to aid in fluency with operations.
Automatically recall basic addition and subtraction facts with fluency.
Solve addition and subtraction equations up to 100, both with and without crossing the tens boundary. This includes equations with a 2-digit and 1-digit number (e.g., $54 + 3$ , $54 + 8$ , $54 - 3$ , and $54 - 8$ ), a 2-digit number with a multiple of 10 (e.g., $54 + 10$ and $54 - 10$ ), and a 2-digit number with another 2-digit number (e.g., $54 + 23$ , $54 + 37$ , $54 - 23$ , and $54 - 37$ ).
Use simple math tricks to help with crossing the tens boundary (e.g., $35 + 9 = 35 + 10 - 1$ or $35 + 11 = 35 + 10 + 1$ ).
Apply mental and written strategies for addition (with up to three addends) and subtraction (with up to two subtrahends) of whole numbers up to 100.
Explore different relationships between operations: finding neighbors, breaking down numbers (e.g., $64 = 60 + 4$ , $80 = 2 \times 40$ ), and comparing numbers (e.g., $10 + 2 = 6 \times 2$ ).
Use number patterns to learn multiplication tables up to $10 \times 10$ .
Automatically recall multiplication tables up to $10 \times 10$ and corresponding division facts with fluency.
Use mental and written strategies for multiplication (1-digit by 1-digit) and division (1-digit divisor) of whole numbers.
Read, write, and model multiplication and division problems.
Use mathematical vocabulary and symbols of addition, subtraction, multiplication, and division: sum, difference, multiply, product, divide, and quotient.
Real-life word problems using each of the four operations with numbers.
Understand fractions as part of a whole (i.e., dividing a whole to make fractional parts and writing the fractional part of the shaded region).

Recognize, find, and name fractions up to an eighth of a length, shape, set of objects, or quantity.
Select and explain an appropriate method for solving a problem.
Count money by modeling equal values (e.g., 1€ can be made up of two 50¢ coins, five 20¢ coins, or 10¢ + 20¢ + 20¢ + 50¢) up to notes of 100€
Model addition and subtraction using money.
<b>Patterns and Functions</b>
Recognize, describe, and extend more complex numerical patterns, such as increasing or decreasing sequences and filling in missing numbers within a set.
Analyze patterns in number systems up to 1,000.
Understand and use the relationship between addition and subtraction (e.g., $34 + 3 = 37$ , $37 - 3 = 34$ ).
Identify patterns and rules for multiplication and division (e.g., $4 \times 3 = 12$ , $3 \times 4 = 12$ , $12 \div 3 = 4$ , $12 \div 4 = 3$ ).
Model the relationship between addition and multiplication using manipulatives to represent repeated addition.
Model the relationship between division and subtraction using manipulatives.
Represent multiplication as an array using manipulatives.
Solve real-life word problems using numerical patterns with numbers up to 100.
<b>Measurement</b>
Review from Grade 1: Estimate, measure, label, and compare length and area using non-standard units of measurement.
Estimate, measure, label, and compare using formal methods and standard units of measurement for length, mass, capacity, time, and temperature.
Select appropriate tools and units of measurement.
Understand the importance of using standard units of measurement.
Using a ruler, measure length in meters (m), centimeters (cm), and millimeters (mm) and perform basic conversions without exceeding 100.
Read and write the time to the full hour, half-hour, and quarter-hour using both analog and digital clocks, including 12-hour and 24-hour formats with AM and PM.
Use a calendar to determine the date and to identify and sequence the days of the week and months of the year.
Measure time using minutes, hours, days, weeks, months, and years, and perform basic conversions, including measuring elapsed time (not exceeding 100), such as $24 \text{ hours} = 1 \text{ day}$ and $7 \text{ days} = 1 \text{ week}$ .
Name the seasons and their corresponding months.
Review from Grade 1: Estimate, measure, label, compare, and order capacity using non-standard units of measurement.
Use a balance scale to estimate, compare, and order the mass of objects.
Solve one-step real-life word problems involving measurement, working towards two-step problems with numbers ranging from 30 to 100.
<b>Shape and Space</b>
Review from Grade 1: Identify, describe, and model congruency in 2-D shapes (such as squares, rectangles, hexagons, triangles, and pentagons), including the number of sides and corners.
Combine and transform 2-D shapes to create new shapes.

Identify and describe 3-D shapes (including cubes, cones, spheres, cylinders, and pyramids), detailing the number of faces, edges, and vertices for each.
Create and explain various spatial concepts with simple directions, including clockwise and anticlockwise.
Use prepositions of location and prepositional phrases (e.g., to the right of, in the middle of, below, above, between) to describe objects on a map
Review slides (translations) and flips (reflections) of objects.
Draw objects after sliding and/or flipping them.
Describe the turn of an object and then continue the pattern.
Solve real-life word problems involving shapes and space concepts above with one-step solutions—up to two steps for advanced problems.
<b>Data Handling</b>
Collect, classify, and represent data (e.g., tally, table, pictograph, bar graph) and interpret the results by comparing quantities: more, fewer, less than, greater than, and difference.
Discuss, compare, and create sets from data with subsets using trees, Carroll, Venn, and other diagrams (e.g., tally, bar graph, and pictogram).
Design a survey, process the data, and interpret the results.
Identify the likelihood of certain events using the terms impossible, unlikely, likely, and certain.
Solve real-life word problems with data handling involving numbers from 30 to 100.