

Grade 2 Math

Express numbers through 999 using place value.

- Compare and order numbers to 1000; use the symbols $>$ and $<$.
- Read and write numbers to 1000 in numerals and words, and relate them to the quantities they represent.
- Count to 1000 by 1s, 10s and 100s starting from any number in the sequence.

Skip counting continues in 2nd grade, by 3's and 4's starting with 0, and by 2's, 5's and 10's starting from any whole number.

Add and subtract fluently with numbers up to 99 to solve problems, using strategies including formal algorithms.

- Given a contextual situation that involves addition and subtraction for numbers through 99, model using objects or pictures, explain in words, record using numbers and symbols; solve (initially with strategies and derived facts, eventually with algorithms).
- Add fluently two numbers through 99, using strategies including formal algorithms; subtract fluently two numbers through 99.
- Decompose 100 into addition pairs, e.g., $100 = 99 + 1 = 98 + 2$.
- Find the distance between numbers on the number line, e.g., how far is 79 from 26?
- Find missing values in open sentences, e.g., $42 + _ = 57$; use relationship between addition and subtraction.
- Estimate the sum of two numbers with three digits.
- Calculate mentally sums and differences involving: three-digit numbers and ones; three-digit numbers and tens; three-digit numbers and hundreds.
- Measure lengths in meters, centimeters, inches, feet, and yards approximating to the nearest whole unit using abbreviations: cm, m, in, ft, yd.; compare lengths; add and subtract lengths (no conversion of units).
- Determine perimeters of rectangles and triangles by adding lengths of sides, recognizing the meaning of perimeter.

Recognize simple multiplication and division situations up to 5×5 , represent them with objects, words and symbols; solve using strategies.

- Understand multiplication as the result of counting the total number of objects in a set of equal groups, e.g., 3×5 gives the number of objects in 3 groups of 5 objects, ie., $3 \times 5 = 5 + 5 + 5 = 15$.
- Represent multiplication using area and array models.
- Understand division (\div) as another way of expressing multiplication, using fact families within the 5×5 multiplication table; emphasize that division "undoes" multiplication, e.g., $2 \times 3 = 6$ can be rewritten as $6 \div 2 = 3$ or $6 \div 3 = 2$.
- Given a situation involving groups of equal size or of sharing equally, represent with objects, words, and symbols; solve.
- Develop strategies for fluently multiplying numbers up to 5×5 .
- Find the area of a rectangle with whole number side lengths by covering with unit squares and counting, or by using a grid of unit squares; write the area as a product. Measure area using non-standard units to the nearest whole unit.

Recognize, name, and write commonly used fractions: $1/2$, $1/3$, $2/3$, $1/4$, $2/4$, $3/4$.

- Recognize, name, and represent commonly used unit fractions with denominators 12 or less; model $1/2$, $1/3$, and $1/4$ by folding strips.
- Place 0 and halves, e.g., $1/2$, $1 \frac{1}{2}$, $2 \frac{1}{2}$, on the number line; relate to a ruler.

- For unit fractions from $\frac{1}{12}$ to $\frac{1}{2}$, understand the inverse relationship between the size of the denominator; compare unit fractions from $\frac{1}{12}$ to $\frac{1}{2}$.
- Recognize that fractions such as $\frac{2}{2}$, $\frac{3}{3}$ and $\frac{4}{4}$ are equal to the whole (one).

Add and subtract money in mixed units, e.g., \$2.50 + 60 cents and \$5.75 - \$3, but not \$2.50 + \$3.10.

- Read and write amounts of money using decimal notations, e.g., \$1.15. *Students do not learn about decimals in 2nd grade. They are just learning the standard notation for dollars and cents.*
- Solve simple word problems involving (length and) money.

Tell and write time from the clock face in 5 minute intervals and from digital clocks to the minute.

- First grade: Tell time on a twelve-hour clock face to the hour and half-hour.
- Using both A.M. and P.M., tell and write time from the clock face in 5 minute intervals and from digital clocks to the minute; include reading time: “9:15” as “nine-fifteen” and “9:50” as nine-fifty; interpret time both as minutes after the hour and minutes before the next hour, e.g., 8:50 as eight-fifty and ten to nine. Show times by drawing hands on clock face.
- Use the concept of duration of time, e.g., determine what time it will be half an hour from 10:15.

Describe and construct various two- and three-dimensional geometric shapes.

- Distinguish between curves and straight lines and between curved surfaces and flat surfaces.
- Classify familiar plane and solid objects, e.g., square, rectangle, rhombus, cube, pyramid, prism, cone, cylinder, and sphere, by common attributes such as shape, size, color, roundness, or number of corners and explain which attributes are being used for classification.
- Recognize that shapes that have been slid, turned or flipped are the same shape, e.g., a square rotated 45° is still a square.

Also in 2nd grade:

- Read temperature using the scale on a thermometer in degrees Fahrenheit.
- Measure area using non-standard units to the nearest whole unit.
- Find the area of a rectangle with whole number side lengths by covering with unit squares and counting, or by using a grid of unit squares; write the area as a product. Perimeter and area are power standards in both 3rd and 4th grades.
- Find and name locations using simple coordinate systems such as maps and first quadrant grids. Also useful in social studies.
- Continue to use pictographs to represent data. This is an extension of the 1st grade power standard.