

First Grade Math



Course Overview

First grade Math provides experiences to help students develop a formal understanding of numbers and mathematical concepts. Physical models still play a fundamental role in linking the real world to symbolic expressions. Students will:

- Work with patterns and sequences
- Practice addition and subtraction
- Learn to tell time and count money

- Identify place values to hundreds
- Practice measuring length, capacity, and weight
- Work with geometric shapes
- Become familiar with the concept of symmetry
- Solve problems using logical reasoning, drawings, and models
- Begin to develop intuitions about probability and fractions

Course Outline

Numbers to 12

- Count, read, write, compare, and order whole numbers to 12
- Compare and order ordinals first through tenth
- Identify one more than and one less than a given number
- Count forward and back on a number line
- Solve problems by drawing pictures and finding patterns

Understanding Addition: Facts to 6

- Show the meaning of addition (joining, putting together, increasing)
- Know the addition facts to 6
- Write addition number sentences
- Understand that numbers can be added in any order
- Identify and extend simple numeric patterns for addition
- Solve problems by using graphs and acting out problem situations

Understanding Subtraction: Facts to 6

- Show the meaning of subtraction (taking away, separating)
- Know the subtraction facts to 6
- Write subtraction number sentences
- Understand addition and subtraction as inverse operations
- Add and subtract with zero
- Identify and extend simple numeric patterns for subtraction
- Solve problems by choosing the operations and writing number sentences

Addition Facts to 12

- Learn the addition facts to 12
- Develop an understanding of addition strategies such as using a number line, addition patterns, and doubles and near doubles
- Add three one-digit numbers

- Understand that the order in which the addends are grouped does not affect the sum
- Solve problems by asking questions and choosing the operations

Subtraction Facts to 12

- Learn the subtraction facts to 12
- Develop an understanding of subtraction strategies such as using a number line, and identifying and using subtraction patterns
- Use addition to check subtraction
- Identify addition and subtraction fact families
- Solve problems by drawing pictures and using models

Place Value to 100

- Read, count, write, compare, and order whole numbers to 100
- Understand place value by representing numbers to 100 as tens and ones
- Understand and describe skip counting to 100 by twos, fives, and tens
- Solve problems by using the guess-and-test strategy and logical reasoning

Money and Time

- Learn the value of pennies, nickels, dimes, and quarters
- Sort, count, and find the value of a group of coins
- Show different combinations of coins that equal the same value
- Tell time to the nearest half hour
- Relate time to events
- Determine the duration of elapsed time
- Solve problems using logical reasoning and hidden information

Geometry, Fractions, and Probability

- Identify common plane and solid figures, and describe their attributes
- Recognize line symmetry as equal parts of plane figures



- Recognize congruent figures as those with the same size and shape
- Recognize, name, and write $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ as part of a whole or part of a set
- Explore the arrangement of objects and understand the likelihood of simple events
- Solve problems using logical reasoning, drawings, and models

Add and Subtract Two-Digit Numbers

- Add and subtract ones and tens
- Add and subtract two-digit whole numbers and money amounts without regrouping
- Estimate two-digit whole numbers to the nearest ten
- Use models to add and subtract two-digit whole numbers with regrouping
- Solve problems by choosing operations and using logical reasoning

Measurement

- Measure an object by identifying a unit of measure and using the appropriate tools
- Measure, compare, and estimate length, capacity, and weight/mass in English and metric units
- Measure perimeter using nonstandard units
- Read a thermometer to find temperature in degrees Fahrenheit
- Solve problems by using maps and logical reasoning

Addition and Subtraction Facts to 18

- Learn addition and subtraction facts to 18
- Identify fact families
- Add and subtract using strategies such as related facts, the order of property, doubles, and making ten
- Solve problems by drawing pictures and knowing when to ignore extra information

Moving On in Math

- Strengthen understanding of numeration, place value, and regrouping concepts and skills
- Identify function rules
- Find missing numbers or unknown operations
- Explore regrouping in addition and subtraction of two-digit numbers
- Add three two-digit numbers
- Understand numbers to 999 as hundreds, tens, and ones
- Solve problems by making tables and using the guess-and-test strategy

Lesson Time and Scheduling

Total lessons: 180

Lesson Time: 60 minutes. You might choose to split the lessons into smaller segments and take breaks as needed. K¹²'s online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Math Textbook, Grade 1

Counting Chips

Multilink Cubes

Game Spinner

Base 10 Cubes

Base 10 Rods

Geometric Solids

GeoBoard

NOTE: List subject to change.