
SCOPE AND SEQUENCE

Developmental Mathematics is a complete number-learning system, in which the subject matter is structured logically, starting with counting, through the concepts, facts and computational skills with whole numbers, decimals and fractions into the beginnings of algebra and geometry.

The following is a listing of the topics covered within the different levels. An examination of these levels will show the sequential nature of the program. The sequence follows the growth of numbers as concepts and substance to think and operate with, both in mental and in written form.

Level 1. Ones: Concepts and Symbols

- Concepts of numbers one, two, three,..., nine
- Reading the symbols 1, 2, 3,..., 9
- Writing the symbols 1, 2, 3,..., 9

Level 2. Ones: Addition Concepts and Basic Facts

- Concept of addition
- 36 addition facts with ones
- Reading and writing addition number sentences

Level 3. Ones: Subtraction Concepts and Basic Facts

- Concept and symbol of subtraction
- 36 subtraction facts with ones
- Reading and writing subtraction number sentences
- Concept and symbol of zero
- 19 addition facts with zero
- 19 subtraction facts with zero

Level 4. Tens: Concepts, Addition and Subtraction Facts

- Concepts and symbols of ten, twenty,..., ninety
- 36 addition facts with tens
- 45 subtraction facts with tens

Level 5. Tens and Ones: Simple Addition and Subtraction

- Concept and symbols of a tens-and-ones number
- Adding without grouping
- Subtracting without exchange

Level 6. Tens and Ones: Adding with Grouping

- 45 addition facts involved in grouping
- Adding with grouping in horizontal form
- Adding with grouping in vertical form

Level 7. Tens and Ones: Subtracting with Exchange

- 45 subtraction facts involved in exchange (borrowing)
- Subtracting with exchange in horizontal and vertical forms

Level 8. Multiplication: Concepts and Basic Facts

- Concept and symbol of multiplication
- 64 basic multiplication facts
- $1 \times N$, $N \times 1$, $0 \times N$, $N \times 0$
- 100 multiplication facts

Level 9. Division: Concepts and Basic Facts

- Concept and symbol of division
- 64 basic division facts
- $N \div 1$, $N \div N$, $1 \div N$
- 90 division facts

Level 10. Hundreds and Three-Unit Numbers: Concepts, Addition and Subtraction Skills

- Concept and symbol of hundreds
- Extending addition facts and skills to hundreds
- Concept and symbol of a three-unit number
- Extending addition and subtraction skills to three-unit numbers

Level 11. Three-Unit Numbers: Multiplication and Division Skills

- Multiplying by ones, i.e., 7×25 , 5×127
- Multiplying by tens, i.e., 20×20 , 30×30
- Multiplying by a two-unit number, i.e., 23×37
- Dividing by ones, i.e., $785 \div 5$, $798 \div 5$
- Dividing by two-unit number, i.e., $398 \div 25$

Level 12. Thousands and Large Numbers: Concepts and Skills

- How a four-unit number is formed from its components
- Extending the place value system to four, five and six places
- Extending addition and subtraction skills
- Extending multiplication and division skills

Level 13. Decimals, Fractions and the Metric System: Concepts and Basic Skills

- Extending place value to tenths, hundredths,...
- Extending the four operations to decimals
- Metric measures of length, capacity, and weight

Level 14. Fractions: Concepts and Skills

- Concepts and symbols of fractions and mixed numbers
- Adding and subtracting fractions of the same unit
- A whole number multiplied by a fraction or a mixed number
- Dividing a whole number by a fraction
- Dividing by a fraction of the same unit

Level 15. Fractions: Advanced Skills

- Changing into a smaller or a larger fractional unit
- Adding and subtracting fractions of different units
- Dividing by a fraction or a mixed number
- Multiplying by a fraction or a mixed number

Level 16. Special Topics: Ratio, Percent, Graphs and More

- Ratio
- Percent
- Graphs
- Proportion
- Probability
- Number Theory