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The Mathematics Content Authority List for K-6 (abridged) represents an attempt to list in one volume the mathematics concepts and skills currently taught in the elementary schools. The list consists of approximately 300 items involving concepts from number systems and numeration, sets, geometry, measurement of non-geometric quantities, and number patterns and relationships. Definitions, explanations, and examples are provided in an expanded version of this list. This list is used by the Pennsylvania Retrieval of Information for Mathematics Education System (PRIMES) Project to code elementary school mathematics textbooks and textbook activities for storage and retrieval. (RP)

PENNSYLVANIA DEPARTMENT OF PUBLIC INSTRUCTION

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

Abridged Mathematics Content Authority List: K-6

PRIMES

PENNSYLVANIA RETRIEVAL OF INFORMATION FOR MATHEMATICS EDUCATION SYSTEM

MATHEMATICS CONTENT AUTHORITY
LIST: K-6 (abridged)

Commonwealth of Pennsylvania
Department of Public Instruction
Bureau of Research
Bureau of General and
Academic Education

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PREFACE

The *MATHEMATICS CONTENT AUTHORITY LIST: K-6 (abridged)* represents an attempt to collect in one volume the mathematics concepts and skills currently taught in the elementary schools. The list consists of approximately three hundred items. Definitions, explanations and examples are provided in an expanded version of this list. The numbers in parentheses following selected items are cross-references to other items that may be relevant. This list is used by the Pennsylvania Retrieval of Information for Mathematics Education System (PRIMES) project to code twenty elementary school mathematics series. The numbers along the left margin are code numbers used to access a computer-generated index that lists the relevant lessons in the commercially published series.

The *MATHEMATICS CONTENT AUTHORITY LIST: K-6 (abridged)* is the result of contributions made by many individuals over the last three years. But were it not for the dedication and commitment of *Dr. Joy E. Mahachek*, retired, chairman, mathematics department, Indiana University of Pennsylvania, this publication would not have been possible. The final draft was carefully reviewed by *Dr. Lee Boyer*, retired, professor, mathematics department, Millersville State College, and many of his suggestions were incorporated in the text.

Among the other people who participated in the development of the publication are: *Dr. J. Fred Weaver*, University of Wisconsin; *Dr. Earle F. Myers*, University of Pittsburgh; *Dr. C. Alan Riedesel*, The Pennsylvania State University, who served on a committee to review the main concepts of this publication and to edit an early draft of the content items.

Additional suggestions were made by *Dr. Sara Rhue*, Temple University; *Dr. Michael Montemuro*, West Chester State College, Pennsylvania; *Dr. Willard Hennemann* and *Miss Mildred Reigh*, Indiana University of Pennsylvania; and *Mr. Donald Sapko*, California State College, Pennsylvania.

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8040 . . . . . 3. Solution sets of equalities and inequalities on a coordinate plane

8044 . . . . D. Descriptive statistics

8050 . . . . . 1. Frequency tables, charts, graphs (bar, line, circle, dot, picture, etc.)

8060 . . . . . 2. Measures of central tendency: average, mean, mode, median

8070 . . . . . 3. Measures of variability: range, quartiles, percentiles, average deviation, standard deviation

8080 . . . . E. Probability

8084 . . . . F. Finite mathematical systems

8100 . . . . . 1. Modular arithmetic (clock arithmetic)

8110 . . . . . 2. Without numbers

8120 . . . . . 3. Other

8130 . . . . G. Logic

8140 . . . . H. Functions and relations

8150 . . . . I. Estimation
(See 3100)

8160 . . . . J. Relations (properties of)

8170 . . . . K. Mathematical sentences (equations)
(See 4125)

8992 . . Topic VIII: Summaries

9000 . . . . A. General review

9010 . . . . B. Test

9020 . . . . C. Review properties of and basic operations with whole numbers

9030 . . . . D. Review properties of and basic operations with fractional numbers

9040 . . . . E. Review properties of and basic operations with integers

9050 . . . . F. Review of numeration

9060 . . . . G. Review of sets

9070 . . . . H. Review of geometry

9080 . . . . I. Review of measurement

9090 . . . . J. Review of number patterns and relationships

9100 . . . . K. Review of other topics

9101 . . . . . 1. Ratio and proportion

9102 . . . . . 2. Percent

9103 . . . . . 3. Graphs

9104 . . . . . 4. Statistics

9105 . . . . . 5. Probability

9106 . . . . . 6. Finite mathematical systems

9107 . . . . . 7. Logic

9108 . . . . . 8. Functions and relations

9109 . . . . . 9. Estimation

9110 . . . . . 10. Relations, properties

9111 . . . . . 11. Mathematical sentences (equations)