

FUNDAMENTALS OF MATHEMATICS

FOR TEACHERS

TABLE OF CONTENTS

Chapter 1: Problem Solving

- | | | |
|-----|------------------------------|-------|
| 1.1 | Problem Solving with Algebra | 1 - 6 |
|-----|------------------------------|-------|

Chapter 2: Sets, Functions, and Reasoning

- | | | |
|-----|---|---------|
| 2.1 | Sets: Basic Terms and Set Notation | 7 - 19 |
| 2.2 | Coordinate System and Graphs | 20 - 32 |
| 2.3 | Functions | 33 - 51 |
| 2.4 | Introduction to Inductive and Deductive Reasoning | 52 - 63 |

Chapter 3: Whole Numbers

- | | | |
|-----|---|----------|
| 3.1 | Numeration Systems | 65 - 81 |
| 3.2 | Addition and Subtraction of Whole Numbers | 82 - 93 |
| 3.3 | Multiplication of Whole Numbers | 94 - 98 |
| 3.4 | Division and Exponents | 99 - 113 |

Chapter 4: Number Theory

- | | | |
|-----|------------------------|-----------|
| 4.1 | Factors | 115 - 119 |
| 4.2 | Multiples, GCF and LCM | 120 - 129 |

Chapter 5: Integers and Fractions

- | | | |
|-----|--|-----------|
| 5.1 | Integers; Addition and Subtraction | 131 - 141 |
| 5.2 | Multiplication, Division, Order of Operation on Integers | 142 - 148 |
| 5.3 | Introduction to Fractions | 149 - 158 |
| 5.4 | Reducing, Equivalent, and Comparing Fractions | 159 - 177 |
| 5.5 | Operations with Fractions | 178 - 200 |

Chapter 6: Decimals, Rational/Irrational Numbers

- | | | |
|-----|---|-----------|
| 6.1 | Decimals, Place Values, Read, Write, and Rounding Decimals | 201 - 215 |
| 6.2 | Operations and Decimals | 216 - 240 |
| 6.3 | Fractions to Decimals, Compare Decimals | 241 - 252 |
| 6.4 | Multiplication/Division by Powers of 10 and Scientific Notation | 253 - 258 |

6.5	Find Fraction Notation for a Ratio or a Rate	259 - 268
6.6	Percents, Conversion to Decimals and Fractions	269 - 282
6.7	Percent Problems using Percent Equations	283 - 298
6.8	Rational Numbers: Identifying and Graphing	299 - 309
6.9	Operations on Real Numbers	310 - 320

Chapter 7: Statistics

7.1	Reading, Interpreting and Graphing Data	321 - 338
7.2	Sampling Methods	339 - 342

Chapter 8: Probability

8.1	Single and Multistage Experiments	343 - 359
-----	-----------------------------------	-----------

Chapter 9: Geometric Measurement

9.1	Plane Figures Polygons and Tessellations	360 - 369
9.2	Space figures	370 - 373
9.3	Symmetric Figures	374 - 378

Chapter 10: Measurement

10.1	Systems of Measurement	379 - 404
10.2	Area and Perimeter	405 - 411
10.3	Volume and Surface Area	412 - 416

Chapter 11: Motions in Geometry

11.1	Constructions	417 - 446
11.2	Congruence Mappings	447 - 463
11.3	Similarity Mappings	463 - 468

Answers		A.1-A.16
----------------	--	----------

