

Table of Contents

Introduction	1
Requirements for Teacher Certification in California	1
The Goals and Scope of the CSET	2
Criterion-Referenced Tests	2
CSET Domains	2
Exam Questions	2
Administration of the CSET	3
CSET Subtest Time Allotment	3
Requirements for Test Admission	3
Retaking the CSET	3
Content Specifications in CSET: Mathematics	4
Types of Questions	4
Multiple-Choice Questions	4
Enhanced Multiple-Choice Questions	5
Constructed-Response Questions	5
Scoring Information	5
Use of Approved Graphing Calculator	7
Test-Taking Strategies	7
Develop a Focusing Process	8
Check the Resources You Need	8
Refer to the Solution Manual	9
Important Considerations for This TestPrep Book	10

PART I: CONTENT AREAS, DOMAINS, AND PRACTICE ITEMS

CSET Mathematics Content Areas and Domains	13
Mathematics Subtest I: Algebra and Number Theory	13
Part I: Content Domains for Subject Matter Understanding and Skill in Mathematics (Algebra and Number Theory)	13
Part II: Subject Matter Skills and Abilities Applicable to the Content Domains in Mathematics (Algebra and Number Theory)	14
Mathematics Subtest II: Geometry and Probability and Statistics	16
Part I: Content Domains for Subject Matter Understanding and Skill in Mathematics (Geometry and Probability and Statistics)	16
Part II: Subject Matter Skills and Abilities Applicable to the Content Domains in Mathematics (Geometry and Probability and Statistics)	17
Mathematics Subtest III: Calculus and History of Mathematics	19
Part I: Content Domains for Subject Matter Understanding and Skill in Mathematics (Calculus and History of Mathematics)	19
Part II: Subject Matter Skills and Abilities Applicable to the Content Domains in Mathematics (Calculus and History of Mathematics)	20
Practice Items	23
Content Domain 1.4: Linear Algebra	23
Magnitude and Direction	25
Addition of Vectors	26
Multiplication of a Vector and a Scalar	28
Dot Product	28
Cross Product	30
Properties of Vectors	36

Properties of the Dot Product	36
Properties of Cross Product	37
Adding and Subtracting Matrices	42
Multiplication of Matrices	43
Determinants	45
Solving Systems of Equations	46
Content Domain 5.1: Trigonometry	50
Content Domain 5.3: Derivatives and Applications	55

PART II: CSET PRACTICE TESTS

Practice CSET: Mathematics Test I	67
Practice CSET: Mathematics Subtest I	67
Practice CSET: Mathematics Subtest II	79
Practice CSET: Mathematics Subtest III	93
Answer Key for Practice CSET: Mathematics Test I	104
Solutions for Practice CSET: Mathematics Test I	107
Practice CSET: Mathematics Subtest I	107
Practice CSET: Mathematics Subtest II	116
Practice CSET: Mathematics Subtest III	124
Practice CSET: Mathematics Test II	133
Practice CSET: Mathematics Subtest I	133
Practice CSET: Mathematics Subtest II	145
Practice CSET: Mathematics Subtest III	159
Answer Key for Practice CSET: Mathematics Test II	171
Solutions for Practice CSET: Mathematics Test II	174
Practice CSET: Mathematics Subtest I	174
Practice CSET: Mathematics Subtest II	185
Practice CSET: Mathematics Subtest III	193

PART III: STUDY AIDS

Glossary of Important Terms	203
Description of Important Formulas	223
Resources	233