

10 Geometry: Understanding Area and Volume



Chapter Pacing Guide

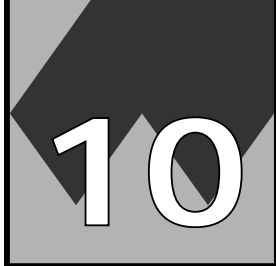
Please note that this pacing guide is based upon completing the entire text in 165 classes, approximately 50 minutes each. More time can be allotted for this chapter if you do not plan to teach the entire text.

Day (Standard)	Day (Honors)	Lesson	Title
1	1	*Chapter Project	Theme: Measurement Measuring Up
2 & 3		*10-1A	<small>HANDS-ON LAB</small> Cooperative Learning Area of Irregular Shapes
	2	10-1	Area of Parallelograms
4	3	10-2	Area of Triangles
5 & 6	4 & 5	10-3	Area of Circles
		*10-3B	<small>HANDS-ON LAB</small> Cooperative Learning Making Circle Graphs
7 & 8	6 & 7	10-4	Three-Dimensional Figures
		*10-4B	<small>HANDS-ON LAB</small> Cooperative Learning Three-Dimensional Figures
9	8	10-5A	<small>THINKING LAB</small> Problem Solving Make a Model
10	9	10-5	Volume of Rectangular Prisms
11	10 & 11	10-6	Surface Area of Rectangular Prisms
		10-6B	<small>TECHNOLOGY LAB</small> Spreadsheets Surface Area and Volume
12	12	Review: Study Guide and Assessment	
13	13	Assessment: Chapter Test	

* Optional

Chapter Resources

<p>Meeting Individual Needs <i>Investigations for the Special Education Student</i>, Exploring the Depths of the Sea, pp. 43-44 <i>Spanish Study Guide and Assessment</i> <i>Study Guide and Practice Workbook</i></p>	<p>Technology <i>Electronic Teacher's Classroom Resources (ETCR)</i> www.glencoe.com/sec/math/mac/mathnet</p>
<p>Interactive Mathematics: Activities and Investigations Units 3 and 4</p>	<p>Applications <i>Family Letters and Activities</i>, pp. 19-20 <i>Spanish Family Letters and Activities</i>, pp. 19-20</p>



Chapter Project (pp. 394-395)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Develop a new system of measure.
- _____ Compare their system with a standard system.

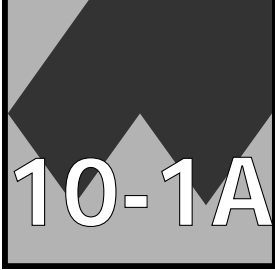
Theme: Measurement

- _____ Chapter Project, *SE*, p. 395
- _____ Chapter 10 Notes, *TWE*, p. 394
- _____ Question of the Day, *TWE*, p. 394
- _____ ⇨ *Investigations and Projects Masters*, pp. 53-56

Homework Assignments

- _____ p. 420, Working on the Chapter Project, Exercise 17
- _____ p. 424, Working on the Chapter Project, Exercise 22
- _____ p. 429, Completing the Chapter Project, Alternative Assessment

KEY SE = Student Edition TWE = Teacher's Wraparound Edition ⇨ = Other Program Components



Lesson Planning Guide (pp. 396-397)



Teacher's Name _____ Dates _____
 Grade _____ Class _____ M Tu W Th F

Objectives

_____ Students find the areas of irregular shapes.

MANAGEMENT

- _____ Getting Started, *TWE*, p. 396
- _____ ⇨ *Hands-On Lab Masters*, p. 12: centimeter grid
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 10-1A
- _____ ⇨ *Overhead Manipulative Resources*: centimeter grid

The California Mathematics Academic Content Standards
Grade 5: MG1.4, MR2.3, MR2.4
Basic Lesson
Grade 6: MR1.2
Basic Lesson

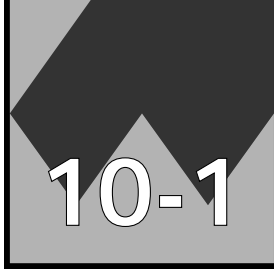
ASSESS

- _____ *TWE*, p. 397
- _____ ⇨ *Hands-On Lab Masters*, p. 61

Class Activity (pp. 396-397)
_____ All: 1-11
_____ Alternate Assignment:

_____ Math Journal, *TWE*, p. 397

KEY SE = Student Edition TWE = Teacher's Wraparound Edition ⇨ = Other Program Components



Lesson Planning Guide (pp. 398-401)



Teacher's Name _____ Dates _____
Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the area of parallelograms.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 398
- _____ ⇨ Transparency 10-1A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 399

2 TEACH

- _____ ⇨ Transparency 10-1B
- _____ Using the Mini-Lab, *TWE*, p. 399
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 10-1
- _____ Multiple Learning Styles, Kinesthetic, *TWE*, p. 399
- _____ In-Class Examples, *TWE*, pp. 399-400
- _____ ⇨ *Study Guide Masters*, p. 70
- _____ Reteaching the Lesson, *TWE*, p. 400
- _____ ⇨ *CD-ROM Program*, Resource Lesson 10-1, Interactive Lesson 10-1
- _____ ⇨ *Interactive Mathematics Tools Software*

The California Mathematics Academic Content Standards	
Grade 5:	MG1.1, MG1.4, MR2.3, MR2.4, MR2.5
	🔑 Key Lesson
Grade 6:	NS2.1, AF3.1, AF3.2, MR2.6
	🔑 Key Lesson

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 400

Homework Assignments (pp. 400-401)

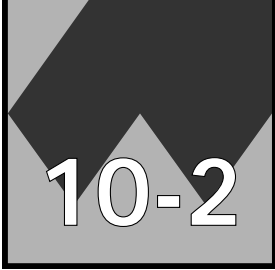
_____ Core: 7-15 odd, 17-19 _____ Enriched: 8-14 even, 15-19
 _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 583
- _____ ⇨ *Practice Masters*, p. 70
- _____ ⇨ *Technology Masters*, Spreadsheet Activity, p. 20

4 ASSESS

- _____ Closing Activity, Modeling, *TWE*, p. 401
- _____ Extending the Lesson, *TWE*, p. 401
- _____ ⇨ *Enrichment Masters*, p. 70

KEY *SE* = Student Edition *TWE* = Teacher's Wraparound Edition ⇨ = Other Program Components



Lesson Planning Guide (pp. 402-405)



Teacher's Name _____ Dates _____
 Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the area of triangles.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 402
- _____ ⇨ Transparency 10-2A
- _____ Motivating the Lesson, Communication, *TWE*, p. 402
- _____ Cross-Curriculum Cue, *TWE*, p. 402

2 TEACH

- _____ ⇨ Transparency 10-2B
- _____ Using the Mini-Lab, *TWE*, p. 403
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 10-2
- _____ In-Class Examples, *TWE*, p. 403
- _____ ⇨ *Study Guide Masters*, p. 71
- _____ Reteaching the Lesson, *TWE*, p. 404
- _____ ⇨ *CD-ROM Program*, Resource Lesson 10-2, Interactive Lesson 10-2

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 404

The California Mathematics Academic Content Standards	
Grade 5:	MG1.1, MG1.4, MR2.3, MR2.4, MR2.5
	Key Lesson
Grade 6:	NS1.4, NS2.1, NS2.4, AF2.1, AF3.1, AF3.2, MR2.6
	Key Lesson

Homework Assignments (pp. 404-405)

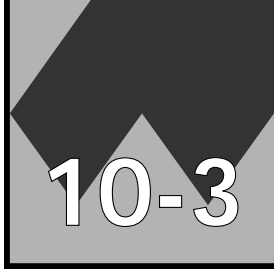
_____ Core: 9-23 odd, 24-27 _____ Enriched: 10-18 even, 20-27
 _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 583
- _____ ⇨ *Practice Masters*, p. 71
- _____ ⇨ *Hands-On Lab Masters*, p. 78
- _____ ⇨ *Science and Mathematics Lab Manual*, pp. 17-20

4 ASSESS

- _____ Closing Activity, Modeling, *TWE*, p. 405
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz A, p. 267
- _____ Extending the Lesson, *TWE*, p. 405
- _____ ⇨ *Enrichment Masters*, p. 71

KEY *SE* = Student Edition *TWE* = Teacher's Wraparound Edition ⇨ = Other Program Components



Lesson Planning Guide (pp. 406-409)



Teacher's Name _____ Dates _____
Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the area of circles.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 406
- _____ ⇨ Transparency 10-3A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 406
- _____ Multiple Learning Styles, Auditory/Musical, *TWE*, p. 406

2 TEACH

- _____ ⇨ Transparency 10-3B
- _____ Using the Mini-Lab, *TWE*, p. 407
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 10-3
- _____ In-Class Examples, *TWE*, p. 407
- _____ ⇨ *Study Guide Masters*, p. 72
- _____ Reteaching the Lesson, *TWE*, p. 408
- _____ Error Analysis, *TWE*, p. 408
- _____ ⇨ *CD-ROM Program*, Resource Lesson 10-3

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 407-408

Homework Assignments (pp. 408-409)

_____ Core: 9-23 odd, 25-28 _____ Enriched: 10-22 even, 23-28
 _____ Alternate Assignment: _____

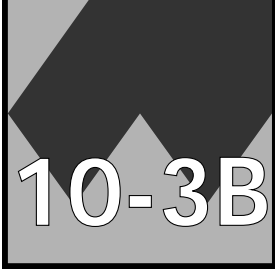
- _____ Extra Practice, *SE*, p. 583
- _____ ⇨ *Practice Masters*, p. 72
- _____ ⇨ *Technology Masters*, Calculator Activity, p. 19
- _____ ⇨ *Classroom Games*, pp. 27-28

4 ASSESS

- _____ Let the Games Begin, *SE*, p. 409
- _____ Closing Activity, Modeling, *TWE*, p. 409
- _____ Extending the Lesson, *TWE*, p. 409
- _____ ⇨ *Enrichment Masters*, p. 72
- _____ ⇨ *Assessment and Evaluation Masters*, Mid-Chapter Test, p. 266
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz B, p. 267

The California Mathematics Academic Content Standards	
Grade 5:	MG1.1, MG1.4, MR2.3, MR2.4, MR2.5
	🔑 Key Lesson
Grade 6:	NS2.1, AF2.1, AF3.1, AF3.2, MG1.1, MG1.2, MR2.6
	🔑 Key Lesson

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Lesson Planning Guide (pp. 410-411)



Teacher's Name _____ Dates _____
Grade _____ Class _____ M Tu W Th F

Objectives

_____ Construct circle graphs.

MANAGEMENT

- _____ Getting Started, *TWE*, p. 410
- _____ ⇨ *Hands-On Lab Masters*, p. 29: circle graph template; p. 22: protractor
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 10-3B
- _____ ⇨ *Overhead Manipulative Resources*: compass, protractor

The California Mathematics Academic Content Standards	
Grade 5:	SDP1.2, SDP1.3, MR2.3, MR2.4
Basic Lesson	
Grade 6:	SDP2.3
	Key Lesson

ASSESS

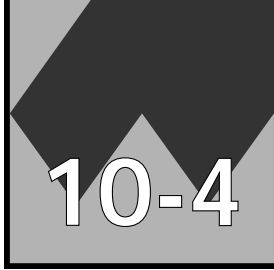
- _____ *TWE*, p. 411
- _____ ⇨ *Hands-On Lab Masters*, p. 62

Class Activity (pp. 410-411)

- _____ All: 1-7
- _____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 411

KEY SE = Student Edition TWE = Teacher's Wraparound Edition ⇨ = Other Program Components



Lesson Planning Guide (pp. 412-414)



Teacher's Name _____ Dates _____
Grade _____ Class _____ M Tu W Th F

Objectives

_____ Identify three-dimensional figures.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 412
- _____ ⇨ Transparency 10-4A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 412

2 TEACH

- _____ ⇨ Transparency 10-4B
- _____ Reading Mathematics, *TWE*, p. 413
- _____ In-Class Examples, *TWE*, p. 413
- _____ ⇨ *Study Guide Masters*, p. 73
- _____ Reteaching the Lesson, *TWE*, p. 43
- _____ Error Analysis, *TWE*, p. 413
- _____ ⇨ *CD-ROM Program*, Resource Lesson 10-4, Interactive Lesson 10-4

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 413

The California Mathematics Academic Content Standards	
Grade 5:	MR2.3, MR2.4
Basic Lesson	
Grade 6:	NS1.2, AF2.3, AF3.1, AF3.2, MG1.2
	Key Lesson

Homework Assignments (pp. 413-414)

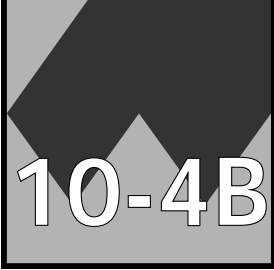
- _____ Core: 9-21 odd, 22-25
- _____ Enriched: 10-18 even, 20-25
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 584
- _____ ⇨ *Practice Masters*, p. 73
- _____ ⇨ *Diversity Masters*, p. 10
- _____ Family Activity, *SE*, p. 414

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 414
- _____ Extending the Lesson, *TWE*, p. 414
- _____ ⇨ *Enrichment Masters*, p. 73
- _____ Mid-Chapter Self Test, *SE*, p. 414

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Lesson Planning Guide (p. 415)



Teacher's Name _____ Dates _____
Grade _____ Class _____ M Tu W Th F

Objectives

_____ Draw three-dimensional figures.

MANAGEMENT

_____ Getting Started, *TWE*, p. 415

_____ ⇨ *Hands-On Lab Masters*, p. 14: isometric dot paper

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*,
Lesson 10-4B

_____ ⇨ *Overhead Manipulative Resources*: isometric dot paper

**The California Mathematics
Academic Content Standards**

Grade 5: MG1.2, MG2.3,
MR2.3, MR2.4

Key Lesson

Grade 6:
Optional Lesson

ASSESS

_____ *TWE*, p. 415

_____ ⇨ *Hands-On Lab Masters*, p. 63

Class Activity (p. 415)

_____ All: 1-6

_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 415

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10-5A

Lesson Planning Guide (pp. 416-417)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Solve problems by making models.

1 FOCUS

_____ Getting Started, *TWE*, p. 416

2 TEACH

_____ In-Class Examples, *TWE*, p. 416

_____ Reteaching the Lesson, *TWE*, p. 416

3 PRACTICE/APPLY

_____ Check for Understanding, *TWE*, p. 417

The California Mathematics Academic Content Standards

Grade 5: MG2.3, MR2.3,
MR2.4, MR3.2

Basic Lesson

Grade 6: AF1.2, AF3.1,
AF3.2, MG1.2,
MR3.2

Basic Lesson

Homework Assignments (p. 417)

_____ All: 3-12

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 584

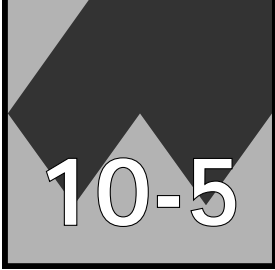
_____ Mixed Problem Solving, *SE*, pp. 593-594

4 ASSESS

_____ Closing Activity, Writing, *TWE*, p. 417

_____ Extending the Lesson, *TWE*, p. 417

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Lesson Planning Guide (pp. 418-420)



Teacher's Name _____ Dates _____
 Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the volume of rectangular prisms.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 418
- _____ ⇨ Transparency 10-5B
- _____ Motivating the Lesson, Communication, *TWE*, p. 418
- _____ Multiple Learning Styles, Naturalist, *TWE*, p. 418

2 TEACH

- _____ ⇨ Transparency 10-5B
- _____ Using the Mini-Lab, *TWE*, p. 418
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 10-5
- _____ In-Class Examples, *TWE*, p. 419
- _____ ⇨ *Study Guide Masters*, p. 74
- _____ Reteaching the Lesson, *TWE*, p. 419
- _____ ⇨ *CD-ROM Program*, Resource Lesson 10-5, Interactive Lesson 10-5

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 419-420

The California Mathematics Academic Content Standards	
Grade 5:	MG1.2, MG1.3, MG1.4, MR2.3, MR2.4, MR2.5, MR2.6, MR3.1
	Key Lesson
Grade 6:	NS2.1, AF3.2, MG1.3, MR2.6
	Key Lesson

Homework Assignments (p. 420)

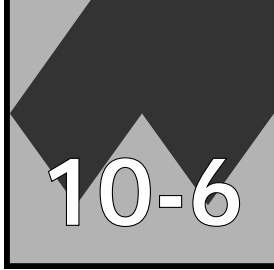
- _____ Core: 7-15 odd, 18-20 _____ Enriched: 8-14 even, 15, 16, 18-20
- _____ Optional: 17 (Working on the Chapter Project)
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 584
- _____ ⇨ *Practice Masters*, p. 74

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 420
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz C, p. 268
- _____ Extending the Lesson, *TWE*, p. 420
- _____ ⇨ *Enrichment Masters*, p. 74

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Lesson Planning Guide (pp. 421-424)



Teacher's Name _____ Dates _____
 Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the surface area of rectangular prisms.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 421
- _____ ⇨ Transparency 10-6A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 421

2 TEACH

- _____ ⇨ Transparency 10-6B
- _____ Using the Mini-Lab, *TWE*, p. 422
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 10-6
- _____ In-Class Examples, *TWE*, p. 422
- _____ ⇨ *Study Guide Masters*, p. 75
- _____ Reteaching the Lesson, *TWE*, p. 422
- _____ Error Analysis, *TWE*, p. 422
- _____ ⇨ *CD-ROM Program*, Resource Lesson 10-6, Interactive Lesson 10-6

The California Mathematics Academic Content Standards	
Grade 5:	MG1.2, MG1.4, MR2.3, MR2.4, MR2.5, MR2.6, MR3.1, MR3.3
	🔑 Key Lesson
Grade 6:	NS2.1, AF3.1, AF3.2, MR2.2, MR2.5, MR2.6
	🔑 Key Lesson

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 423

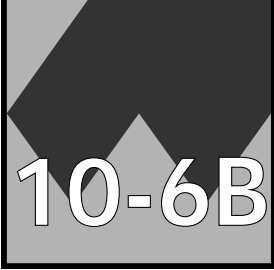
Homework Assignments (pp. 423-424)	
_____ Core: 9-21 odd, 23-26	_____ Enriched: 8-18 even, 20, 21, 23-26
_____ Optional: 22 (Working on the Chapter Project)	
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 585
- _____ ⇨ *Practice Masters*, p. 75
- _____ ⇨ *School to Career Masters*, p. 10

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 424
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz D, p. 268
- _____ Extending the Lesson, *TWE*, p. 424
- _____ ⇨ *Enrichment Masters*, p. 75

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Lesson Planning Guide (p. 425)



Teacher's Name _____ Dates _____
Grade _____ Class _____ M Tu W Th F

Objectives

_____ Use spreadsheets to find the surface area and volume of rectangular prisms.

MANAGEMENT

_____ Getting Started, *TWE*, p. 425

ASSESS

_____ *TWE*, p. 425

The California Mathematics Academic Content Standards
Grade 5: MG1.4, MR2.3, MR2.4
Basic Lesson
Grade 6: Optional Lesson

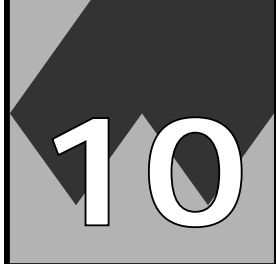
Class Activity (p. 425)

_____ All: 1-6

_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 425

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Review and Assessment (pp. 426-431)



Teacher's Name _____ Dates _____

Grade _____ Class _____ Review M Tu W Th F

Testing M Tu W Th F

_____ Study Guide and Assessment, *SE*, pp. 426-429

_____ Standardized Test Practice, *SE*, pp. 430-431

_____ Chapter Test, *SE*, p. 604

⇔ **Assessment and Evaluation Masters (pp. 253-271)**

Multiple-Choice Tests

_____ Form 1A, 1B, or 1C, pp. 253-258

_____ Standardized Test Practice, pp. 269-270

Free-Response Tests

_____ Form 2A, 2B, or 2C, pp. 259-264

_____ Performance Assessment, p. 265

_____ Cumulative Review, p. 271

_____ ⇔ *MindJogger Videoquizzes*, Chapter 10

_____ ⇔ *Test and Review Software*

_____ ⇔ *CD-ROM Assessment Game*

_____ ⇔ *State Test Preparation CD-ROM*

_____ ⇔ *California Framework Practice and Sample Test Workbook*, Grade 5

_____ ⇔ *California Framework Practice Transparencies*, Grade 5

_____ ⇔ *California Framework Practice and Sample Test Workbook*, Grade 6

_____ ⇔ *California Framework Practice Transparencies*, Grade 6

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