

## Contents

Preface	ix
Acknowledgments	xix
<b>Section 1: The Big Picture</b>	<b>1</b>
1. Issues and Tensions in the Assessment of Mathematical Proficiency ALAN H. SCHOENFELD	3
2. Aims of Mathematics Education JUDITH A. RAMALEY	17
3. The No Child Left Behind Act: Political Context and National Goals SUSAN SCLAFANI	23
<b>Section 2: Perspectives on Mathematical Proficiency</b>	<b>29</b>
4. What Is Mathematical Proficiency? R. JAMES MILGRAM	31
5. What Is Mathematical Proficiency and How Can It Be Assessed? ALAN H. SCHOENFELD	59
<b>Section 3: What Does Assessment Assess? Issues and Examples</b>	<b>75</b>
6. Mathematical Proficiency: What Is Important? How Can It Be Measured? HUGH BURKHARDT	77
7. Aspects of the Art of Assessment Design JAN DE LANGE	99
8. Mathematical Proficiency for Citizenship BERNARD L. MADISON	113
9. Learning from Assessment RICHARD ASKEY	125
10. When Assessment Guides Instruction: Silicon Valley's Mathematics Assessment Collaborative DAVID FOSTER, PENDRED NOYCE, AND SARA SPIEGEL	137

<b>Section 4: The Case of Algebra</b>	<b>155</b>
11. Assessing the Strands of Student Proficiency in Elementary Algebra WILLIAM G. MCCALLUM	157
12. Making Meaning in Algebra: Examining Students' Understandings and Misconceptions DAVID FOSTER	163
13. Task Context and Assessment ANN SHANNON	177
<b>Section 5: What Do Assessments Assess? The Case of Fractions</b>	<b>193</b>
14. Learning About Fractions from Assessment LINDA FISHER	195
15. Assessing a Student's Mathematical Knowledge by Way of Interview DEBORAH LOEWENBERG BALL WITH BRANDON PEOPLES	213
16. Reflections on an Assessment Interview: What a Close Look at Student Understanding Can Reveal ALAN H. SCHOENFELD	269
<b>Section 6: The Importance of Societal Context</b>	<b>279</b>
17. Assessment in France MICHÈLE ARTIGUE	283
18. Assessment to Improve Learning in Mathematics: The BEAR Assessment System MARK WILSON AND CLAU CARSTENSEN	311
19. English Learners and Mathematics Learning: Language Issues to Consider LILY WONG FILLMORE	333
20. Beyond Words to Mathematical Content: Assessing English Learners in the Mathematics Classroom JUDIT MOSCHKOVICH	345
21. Assessment in the Real World: The Case of New York City ELIZABETH TALEPOROS	353
22. Perspectives on State Assessments in California: What You Release Is What Teachers Get ELIZABETH K. STAGE	357
<b>Epilogue: What Do We Need to Know? Items for a Research Agenda</b>	<b>365</b>
About the Authors	369
Subject Index	381
Author Index	385
Task Index	389