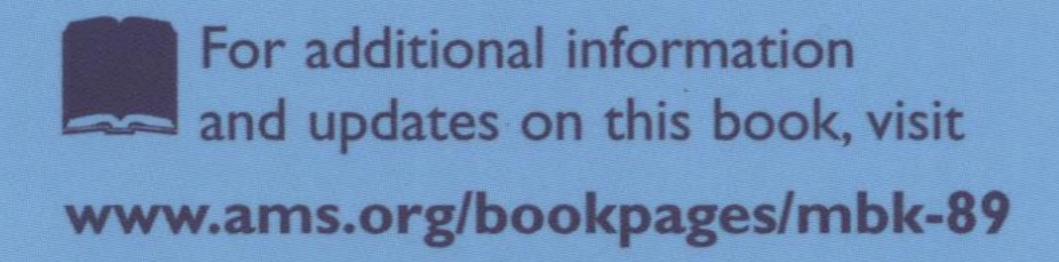


This third edition is a lively and provocative tract on how to teach mathematics in today's new world of online learning tools and innovative teaching devices. The author guides the reader through the joys and pitfalls of interacting with modern undergraduates—telling you very explicitly what to do and what *not* to do. This third edition has been streamlined from the second edition, but still includes the nuts and bolts of good teaching,

discussing material related to new developments in teaching methodology and technique, as well as adding an entire new chapter on online teaching methods.





AMS on the Web www.ams.org

Preface to the Third Edition	ix
Preface to the Second Edition	xi
Preface to the First Edition	xvii
Chapter 1. Guiding Principles	1
1.0. Chapter Overview	1
1.1. Respect	1
1.2. Prepare	3
1.3. Speak Up	5
1.4. Lectures	6
1.5. Questions	10
1.6. Time	14
1.7. Applications	16
1.8. The Moore Method	20
Chapter 2. Practical Matters	23
2.0. Chapter Overview	23
2.1. Voice	23
2.2. Eye Contact	25
2.3. Blackboard Technique	26
2.4. Homework	30
2.5. Office Hours	32
2.6. Designing a Course	35
2.7. Handouts	36
2.8. Teaching Evaluations	37
2.9. Exams	43
2.10. Grading	49
2.11. The Syllabus (and the Course Diary)	52
2.12. Choosing a Textbook	55
2.13. Large Lectures	58
2.14. Problem Sessions, Review Sessions, and	
Help Sessions	63
2.15. On Being a TA	65
2.16. Tutors	66
Chapter 3. Spiritual Matters	69
3.0. Chapter Overview	69
3.1. Breaking the Ice	69
3.2. Math Anxiety	70

3.3.	Inductive vs. Deductive Method		11
3.4.	Who Is My Audience?		74
3.5.	Mentors and Neophytes		76
	Teaching Reform		78
	STEM		83
	How to Ask, How to Answer		84
0.0.	APPENDIX to 3.8: Suggestions for Encoura	oing Class Participation	
3.0	Inquiry-Based Learning	ignig Clabb I alterpation	89
	The Art of Discourse		89
	Do I Have to Teach Calculus Again?		91
0.11.	Do I Have to Teach Calculus Again:		31
Chapter	4. The Electronic World		93
	Chapter Overview		93
	Teaching with the Internet		93
	Online Learning vs. Classroom Learning		94
4.3.	MOOCs		95
	The Khan Academy		98
	The Flipped Classroom		98
	Computer Labs		100
	Clickers		101
	Homework Solutions on the Internet		102
	Online Software		104
	The Course Web Page		105
	Social Media		106
	SmartBoards		107
	Deference LIDIe		108
4.10.	Reference Ofths		100
Chapter	5. Difficult Matters		111
(Table)	Chapter Overview		111
	Non-Native English Speakers		111
	Late Work		113
	Cheating		113
	Incompletes		115
	Discipline		116
	Mistakes in Class		119
	Advice and Consent		120
	Sexism, Racism, Misogyny, and Related Prob	olems	121
5.9.	Begging and Pleading		124
0.0.	2088.118		
Chapter	r 6. A New Beginning		127
6.0.	Chapter Overview		127
6.1.	The Role of the University Professor		127
6.2.	Closing Thoughts		128
D.1.11			101
Bibliogr	raphy		131
Index			137
ALL CON			101