

Contents

Preface	vii
Introduction	
1. Disparities in Viewing Geometry	3
<i>James F. Ulrich, Arlington High School, Arlington Heights, Illinois</i>	
Part One: Informal Geometry	
2. Informal Geometry in Grades K–6	11
<i>Paul R. Trafton, Indiana University, Bloomington, Indiana</i> <i>John F. LeBlanc, Indiana University, Bloomington, Indiana</i>	
3. Informal Geometry in Grades 7–14	52
<i>John C. Peterson, Eastern Illinois University, Charleston, Illinois</i>	
Part Two: Formal Geometry in the Senior High School	
4. Conventional Approaches Using Synthetic Euclidean Geometry	95
<i>Charles Brumfiel, The University of Michigan, Ann Arbor, Michigan</i>	
5. Approaches Using Coordinates	116
<i>Lawrence A. Ringenberg, Eastern Illinois University, Charleston, Illinois</i>	

- | | |
|---|-----|
| 6. A Transformation Approach to Euclidean Geometry | 136 |
| <i>Arthur F. Coxford, Jr., The University of Michigan, Ann Arbor, Michigan</i> | |
| 7. An Affine Approach to Euclidean Geometry | 201 |
| <i>C. Ray Wylie, Furman University, Greenville, South Carolina</i> | |
| 8. A Vector Approach to Euclidean Geometry | 232 |
| <i>Steven Szabo, University of Illinois at Urbana-Champaign, Urbana, Illinois</i> | |
| 9. Geometry in an Integrated Program | 303 |
| <i>Harry Sitomer, C. W. Post College, Greenvale, New York</i> | |
| 10. An Eclectic Program in Geometry | 334 |
| <i>Jack E. Forbes, Purdue University, Calumet Campus, Hammond, Indiana</i> | |

Part Three: Contemporary Views of Geometry

- | | |
|--|-----|
| 11. Geometry as a Secondary School Subject | 369 |
| <i>Howard F. Fehr, Teachers College, Columbia University, New York, New York</i> | |
| 12. An Evolutionary View | 381 |
| <i>Seymour Schuster, Carleton College, Northfield, Minnesota</i> | |
| 13. A Quick Trip through Modern Geometry, with Implications for School Curricula | 397 |
| <i>Ross L. Finney, University of Illinois at Urbana-Champaign, Urbana, Illinois</i> | |

Part Four: The Education of Teachers

- | | |
|---|-----|
| 14. The Education of Elementary School Teachers in Geometry.... | 435 |
| <i>Henry Van Engen, University of Wisconsin, Madison, Wisconsin</i> | |
| 15. The Education of Secondary School Teachers in Geometry | 446 |
| <i>F. Joe Crosswhite, The Ohio State University, Columbus, Ohio</i> | |