CONTENTS

| | Preface vii | | |
|---|---------------|---|--|
| | To the instr | uctor xi | |
| | BASIC CONC | CEPTS | |
| | Sec. 1 | Notation and Terminology 2 | |
| | | Length of a Curve 5 | |
| | | Plane Area 8 | |
| | Sec. 4 | Surface Area and Volume 19 | |
| | Sec. 5 | Elementary Topology 26 | |
| 7 | CONVEY DO | ADIEC | |
| | CONVEX BODIES | | |
| | | Basic Properties of Convex Bodies 32 | |
| | | Plane Convex Bodies 37 | |
| | | Convex Bodies in Space 43 | |
| | | Helly's Theorem 50 | |
| | Sec. 10 | Sets of Constant Width 59 | |
| 3 | TRANSFORM | # A TTONG | |
| | | | |
| | | Transformation Groups 69 | |
| | | Euclidean Motions 75 | |
| | | Similarities 84 | |
| | | Vector Addition of Sets 89 Metions and Decompositions 99 | |
| | | MOHORS and Decompositions | |
| | Sec. 16 | Duality 114 | |
| 4 | EXTREMUM | I PROBLEMS | |
| | Sec. 17 | The Isoperimetric Problem 125 | |
| | Sec. 18 | Blaschke's Selection Theorem 131 | |
| | Sec. 10 | Surface Area and Mixed Volumes 138 | |
| | Sec. 20 | Symmetrization 148 | |
| | 200.20 | ~J 1111100111111111111111111111111111111 | |

| Sec. 22 | Geometric Inequalities 163 | |
|-------------|---------------------------------------|-----|
| | | |
| EUCLIDEAN | n-DIMENSIONAL SPACE | |
| Sec. 23 | Definition of E^n 176 | |
| Sec. 24 | Measurement in E^n 181 | |
| Sec. 25 | Convexity in E^n 192 | |
| | Transformations in E^n 199 | |
| Sec. 27 | Linear Programming 206 | |
| MINKOWSKI | I GEOMETRY | |
| Sec. 28 | Metric Spaces 216 | |
| Sec. 29 | The Minkowski Plane 225 | |
| Sec. 30 | <i>n</i> -dimensional Minkowski Space | 239 |
| Appendix 1 | 249 | |
| Appendix 2 | 252 | |
| Bibliograph | y 254 | |
| Index 257 | • | |

Sec. 21 Convex Functions 156