

**Incidence and Symmetry in Design and Architecture**

Part of [Cambridge Urban and Architectural Studies](http://www.cambridge.org/us/academic/subjects/geography/planning-and-urban-geography/series/cambridge-urban-and-architectural-studies)

**AUTHORS:**

* Jenny A. Baglivo, Fairfield University, Connecticut
* Jack E. Graver, Syracuse University, New York
* **PUBLISHED:** April 1983
* **FORMAT:** Paperback

 **ISBN:** 9780521297844

**Table of Contents**

Forward

Preface

Part I. Incidence: Introduction

Section 1. Incidence and Graph Theory:

 1. Topological transformations

 2. Basic graph theory

 3. Directed graphs

 4. Traversability

 5. Distance

 Section II. Incidence in the Plane:

 6. Maps

 7. Planar graphs

 8. Euler's formula

 9. Polyhedra

Section III. Further Applications of Graph Theory:

 10. Bracing structures

 11. Optimal route design

 12. Mean distance

 13. Triangulations and organization graphs

Section IV. Topology of Surfaces:

 14. Surfaces

 15. Maps on surfaces

 16. Tesselations of the plane

 17. Compact surfaces

Part II. Symmetry: Introduction

Section V. Symmetry and Group Theory:

 18. Planar isometries

 19. Basic group theory

 20. Reflections on the plane

 21. The isometry group of the plane

Section VI. Symmetry in the Plane:

 22. Discrete groups

 23. The circular groups

 24. The frieze groups

 25. The wallpaper groups

Section VII. Symmetry in Space:

 26. Space isometries

 27. Discrete space groups

 28. The layer groups

  29. the rod groups

Section VIII. Symmetry and Enumeration:

 30. A combinational approach to symmetry

  31. Graph symmetry

 32. Enumeration

 33. Fundamental architectural

 arrangements revisited

Bibliography

Indices.