Crannell, Annalisa; **Frantz, Marc**; **Futamura, Fumiko**
Perspective and projective geometry. (English) Zbl 1425.00083
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Publisher's description: Through a unique approach combining art and mathematics, Perspective and Projective Geometry introduces students to the ways that projective geometry applies to perspective art. Geometry, like mathematics as a whole, offers a useful and meaningful lens for understanding the visual world. Exploring pencil-and-paper drawings, photographs, Renaissance paintings, and GeoGebra constructions, this textbook equips students with the geometric tools for projecting a three-dimensional scene onto two dimensions.

Organized as a series of exercise modules, this book teaches students through hands-on inquiry and participation. Each lesson begins with a visual puzzle that can be investigated through geometry, followed by exercises that reinforce new concepts and hone students' analytical abilities. An electronic instructor's manual available to teachers contains sample syllabi and advice, including suggestions for pacing and grading rubrics for art projects.

Drawing vital interdisciplinary connections between art and mathematics, Perspective and Projective Geometry is ideally suited for undergraduate students interested in mathematics or computer graphics, as well as for mathematically inclined students of architecture or art.

MSC:

00A66	Mathematics and visual arts
51-01	Introductory exposition (textbooks, tutorial papers, etc.) pertaining to geometry
51A05	General theory of linear incidence geometry and projective geometries

Software:

GeoGebra

Full Text: DOI