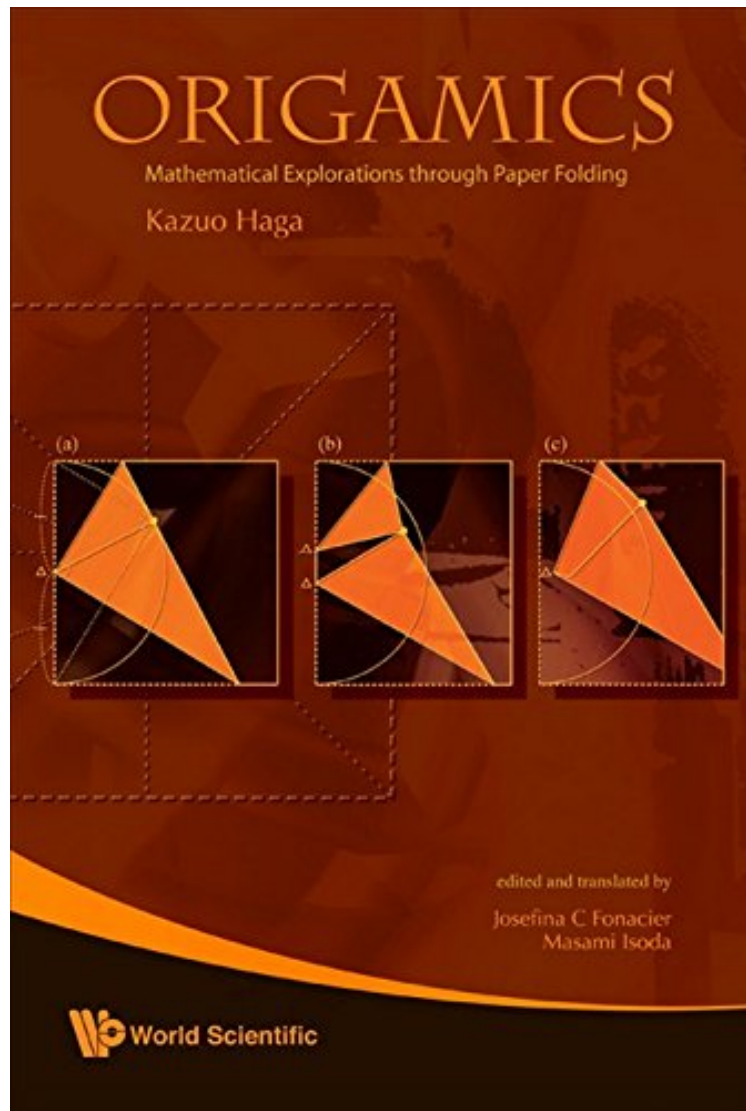


(Download) Origamics: Mathematical Explorations Through Paper Folding

Origamics: Mathematical Explorations Through Paper Folding

Kazuo Haga, Josefina C. Fonacier, Masami Isoda
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Kazuo Haga, Josefina C. Fonacier, Masami Isoda : Origamics: Mathematical Explorations Through Paper Folding before purchasing it in order to gage whether or not it would be worth my time, and all praised Origamics: Mathematical Explorations Through Paper Folding:

0 of 0 people found the following review helpful. This is an excellent reading material for high school students and undergraduates By Chun-Kong Law This book can be viewed as a series of mathematical experiments with paper folding. The author is a retired biology professor who used to play with origamics. The book is interesting in that the experiments can be verified and understood with elementary plane geometry. This is an excellent reading material for

high school students and undergraduates. Highly recommended.

The art of origami, or paper folding, is carried out using a square piece of paper to obtain attractive figures of animals, flowers or other familiar figures. It is easy to see that origami has links with geometry. Creases and edges represent lines, intersecting creases and edges make angles, while the intersections themselves represent points. Because of its manipulative and experiential nature, origami could become an effective context for the learning and teaching of geometry. In this unique and original book, origami is an object of mathematical exploration. The activities in this book differ from ordinary origami in that no figures of objects result. Rather, they lead the reader to study the effects of the folding and seek patterns. The experimental approach that characterizes much of science activity can be recognized throughout the book, as the manipulative nature of origami allows much experimenting, comparing, visualizing, discovering and conjecturing. The reader is encouraged to fill in all the proofs, for his/her own satisfaction and for the sake of mathematical completeness. Thus, this book provides a useful, alternative approach for reinforcing and applying the theorems of high school mathematics. Contents: A Point Opens the Door to Origamics; New Folds Bring Out New Theorems; Extension of the Haga's Theorems to Silver Ratio Rectangles; X-Lines with Lots of Surprises; Intrasquares and Extrasquares ; A Petal Pattern from Hexagons?; Heptagon Regions Exist?; A Wonder of Eleven Stars; Where to Go and Whom to Meet; Inspiration of Rectangular Paper.

This book is lavishly illustrated and easy to follow. Origamics is a great reference for anyone looking for fresh and interesting ways to incorporate discovery into Euclidean geometry classes and will appeal to geometry and paper folding fans of all types. --Mathematical sThis exciting and surprising book is presented quite differently from classical geometry ... The book is highly recommended to mathematics teachers to give them an alternative approach to high school geometry and (from the Introduction) 'provoking more enthusiasm for mathematics study'. --Zentralblatt MATH