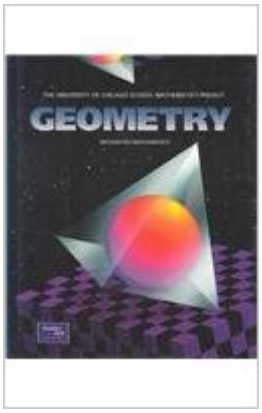
Geometry (University Of Chicago School Mathematics Project)



Synopsis

UCSMP Geometry (University of Chicago School Mathematics Project) Second Edition copyright 2002 hardcover student textbook.

Book Information

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Customer Reviews

UCSMP Geometry (University of Chicago School Mathematics Project) Second Edition copyright 2002 hardcover student textbook.

This is one of two geometry books that I really like. The earlier edition might have been a bit better, but this one is fine. It makes things easy to understand, as it has lots of explanation. I only wish the geometry book I’m teaching out of now were that good.

It is a book I need but a little expensive.

low price. he love it, so fast, receive it next day . Satisfied. It cuts slices as thick or as thin as I want with no crumbs-a nice clean cut. I am completely satisfied with it and am happy to have a slot in my product block that it just fits in.

This review is about the 2nd edition, 2002, ISBN 0130584177 I did not study the book enough to write a full review but here are some observations about errors, rigor and the weight and price of the book. The errors I noticed leafing through the book shocked me, considering the credentials of the

authors and that it is a second edition, the first having been used in many excellent schools. p. 31, bottom drawing. One does not need geometry to notice this is not right, but geometry tells one why it must be wrong. The vanishing points of all the edges of this box lie on a horizontal line which looks like the horizon. That implies that every edge of the box is horizontal. One can't have a box like that. If the line is not the horizon the edges would still all have to be in a plane whose vanishing line is the line on which the vanishing points lie and one can't have a box whose edges are all in the same plane. p. 545 The Mercator "projection" is not really a projection, contrary to what is shown here. The projection shown here stretches north-south distances even more than east-west distances. Mercator's invention was a map which at any given latitude stretches in both directions by the same amount so that angles on the map are the same as in reality, an advantage in navigation. The projection shown here has the formula x = rq, y = r tan f, where q, f denote longitude and latitude, r is a constant and x,y are coordinates on the map. The formula for Mercator's map is different. It can be found in the Wikipedia for example. Next, an observation on the vexing problem of rigor. In a rigorous mathematical presentation "point" and "line" are undefined mathematical objects. A list of axioms enumerates some facts about relations between points and lines. All other statements must be derived from them purely by logic. This is much too difficult and tedious for a high school course. A high school book has to present geometry on a less abstract level. For instance, one should assume the student understands what a distance or an angle is and what it means to move a geometric object. There is plenty of scope for deriving non-obvious facts such as Pythagoras' theorem from obvious ones by logical reasoning. No high school book gets really closer than this to full rigor but many pretend to, often in bizarre or confusing ways. Schaum's Outline has many dozens of "principles" which the author can not prove but the student may use in his proofs. In Discovering Geometry, a book which, I should say, has much good content, the student is often asked to "discover" by drawing a figure and observe it has some property. What has been observed is thereafter treated more or less as an established fact. I will discuss the pretense of rigor in the definition of distance in the present volume. P. 12, bottom: "To find the unique distance between A and B, we make the line into a number line." But making a line into a number line is not a unique process! You have to choose where 0 and 1 are, and even then, if you don't know what distance is, you don't know where to put 2. Another difficulty with this definition is to relate the numbers we put on different lines. To illustrate the difficulty, take a triangle ABC. On the number line AB, let A be 0 and B be 1; on BC, let B be 0 and C be 1; on AC, let A be 0 and C be 3. So, using the procedure of the book, we got a triangle with one side longer than the sum of the other two. The reader will object: I disregarded the obvious fact that the distance between 0 and 1 must be the same on all 3

lines. But that presupposes we know what distance is before we make the lines into number lines. The moral: at this level, let us not pretend to define distance. The student has an idea of what distance is and we must build on that. Lastly, some words about the book's effects on physical and mental well-being. It weighs about 5 lb. The student has to lug much else to and from school and back injury has resulted. The excessive price may be due in part to the bulk. A large part of the bulk is due to irrelevant pictures and text, e.g. pictures of Lenin's tomb and the wife of former French president Mitterrand. Other pictures show well developed students of all ethnic groups and both genders. Presumably they are brilliant students who chose a career in math although their looks qualify them for Hollywood too. The implication that the qualifications for these two careers are similar must be depressing for students lacking sex appeal. If the book had pictures of Math Olympiad winners and great mathematicians instead, they would see that one does not need to be tall and beautiful to create great and beautiful mathematics.

School and Children Bullying for beginners - Guide for kids and parents - How to deal effectively with bullying at school (Children Bullying - School Bullying - School Harassment Book 1) My Weekly School Homework Planner (School, College, University) Geometry for Students and Parents: Geometry problems and solutions Order In Chaos: How The Mandelbrot Set & Fractal Geometry Help Unlock the Secrets of The Entire Universe! (Mandelbrot Set, Fractal Geometry) Spectral Geometry of the Laplacian: Spectral Analysis and Differential Geometry of the Laplacian