

Fibonacci Numbers, by N. N. Vorob'ev. Popular Lectures in Mathematics, Volume 2. Pergamon Press, London, 1961. 66 + ii pages. 10 sh. = \$1.75.

Some Applications of Mechanics to Mathematics, by V. A. Uspenskii. Popular Lectures in Mathematics, Volume 3. Pergamon Press, London, 1961. 58 + i pages. 10 sh. = \$1.75.

Inequalities, by P. P. Korovkin. Popular Lectures in Mathematics, Volume 6. Pergamon Press, London, 1961. 60 + i pages. 10 sh. = \$1.75.

These three little volumes share the quality of being eminently readable by the bright high-school student, to whom they are addressed. In none of them has the author been tempted to sacrifice rigour in order to put his ideas across. The method of induction is used, and carefully explained, wherever applicable, and the subject matter is both interesting and useful to the student who proposes to continue in Mathematics.

The Fibonacci sequence is introduced as a solution to the problem stated by Fibonacci in his "Liber Abaci". It is presented as a simple example of a recursively defined sequence. The simplest properties, as well as some number-theoretic properties, are derived, and Binet's formula proved. The Euclidean algorithm and continued fractions are then discussed, and the limit of a simple infinite continued fraction is shown to be the ratio of two neighbouring Fibonacci numbers as  $n \rightarrow \infty$ .

The treatment of inequalities is not intended to be a full one. A number of important and interesting inequalities are introduced and carefully proved. The number  $e$  is defined as the common limit of two ascending and descending sequences. Applications to the finding of maxima and minima are plentiful.

In "Some Applications of Mechanics to Mathematics" the author proves the reflection property for the circle, ellipse, parabola and hyperbola, using the principle of least potential energy. Using the method of weighted points, a number of familiar theorems, including Ceva's, on the intersection of straight lines are proved. As a conclusion, the finding of an area bounded by the X axis, two ordinates and a curve by means of an integrometer is explained.

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Editor's Note: These books have also been published as "Blaisdell Scientific Paperbacks" by Blaisdell Publishing Company, New York 1961; Price: \$.95 each. In addition, Pergamon Press published Vol. 1-6 of "Popular Lectures in Mathematics" in one volume ("library edition") 1961, Price: 50 sh.