The general treatment is a good one. The proofs are often elegant; and an excellent supply of computational exercises and theoretical problems mesh well with the text. The book is well and carefully written. The reviewer feels, however, that the average student beginning this subject will find some difficulty in reading parts of it. This will depend to some extent on his mathematical sophistication. There is, for example, no gentle introduction to vector spaces through a preliminary discussion of 2- or 3-dimensional spaces. Set notation, the definition of a field, and that of an abstract vector space are given in rapid succession in the first three pages. Chapter VI is more compact, and proceeds at a faster pace, than the preceding chapters.

A few misprints were detected, all trivial. Some finicky observations: In the proof of Theorem 7.1 on p. 166, the right side of equation (7.2) may have only one non-zero term if $a_{ii} = 0$. In Exercise 15, p. 177, could there not be a stray one and/or minus one on the principal diagonal?

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Regular Polytopes, by H.S.M. Coxeter. Second Edition. Macmillan, 1963. xxii + 321 pages.

This excellent book has now been issued in paperback form, with a few changes since the first edition.

On page 74 the number h of sides of the Petrie polygon of $\{p, q\}$ is expressed rationally in terms of p and q. On pages 228-232 there is a direct proof that the number of reflections in a symmetry group generated by four reflections is not less than 2h. These improvements result from recent work by R. Steinberg.

Several figures have been re-drawn, and the plates have been enlarged in accordance with a somewhat larger page size. The bibliography has been brought up to date.

The author's "fifteenth chapter", Regular Honeycombs in Hyperbolic Space, may be found in the Proceedings of the International Congress of Mathematicians, Amsterdam 1954, Volume III, pp. 155-169.

Reviews of the first edition appeared in Mathematical Reviews 10 (1949), pp. 261-262, and the Bulletin of the American Mathematical Society 55(1949), pp. 721-722.

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