expository in character, and they are quite good. I think that Chapter 0 gives a good introduction to the basic facts about representations. Chapter 1 discusses the case of $SL_2(\mathbf{R})$ and can be recommended as a very readable description of the infinite-dimensional representations of $SL_2(\mathbf{R})$. It needs few prerequisites. This cannot be said of the book as a whole, though. The subject matter of the book is difficult, and has many ramifications. This imposes high requirements on a prospective reader. To start with, he needs a thorough familiarity with complex Lie algebras and their representations.

The author makes an effort to present things clearly and efficiently, and usually succeeds in achieving this.

It is to be expected that future developments of the theory expounded in Vogan's book will lead to improvements and simplifications. I hope that the book will stimulate readers to find such improvements. Their efforts will be well spent.

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An introduction to homological algebra, by Joseph J. Rotman,[1] Academic Press, New York, 1979, xi + 376 pp., $26.50.

Homological algebra was invented by Henri Cartan and Samuel Eilenberg after World War II. It is essentially a technique borrowed from topology and

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[1]The author writes that a complete list of errata for the first printing is available from the Educational Department of Academic Press, New York. All these errors have been corrected in the second printing.