To handle the inevitable ambiguity of sign in $\mathrm{SL}(2, \mathbf{C})$, the author orients his lines so that if l has ends u and u' taken in that order it corresponds to the half-turn matrix

$$\mathbf{l} = \frac{i}{u' - u}(u + u' \quad -2uu'\partial \quad -u - u').$$

Then trace relations for products of these matrices based on the formula

$$\operatorname{tr}\mathbf{a}\operatorname{tr}\mathbf{b} = \operatorname{tr}\mathbf{ab} + \operatorname{tr}\mathbf{a}^{-1}\mathbf{b}$$

give the desired trigonometrical relations without ambiguity of sign. Full details, including conventions to handle special position and degeneracy and additional machinery to handle opposite isometries, must await the reader's own study of this intriguing book. For a first perusal that quickly reaches the most accessible parts of the main results, I recommend §§I.3, V.3, VI.2, and VI.5 and 6.

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The classical groups and K-theory, by A. J. Hahn and O. T. O'Meara. Springer-Verlag, Berlin, New York, 1989, 565 pp., $119.00. ISBN 3-540-17758-2

The term "classical groups" was coined by Hermann Weyl and used in the title of his famous book [5]. It refers to the general linear group GL_n (the group of automorphisms of an n-dimensional