

unknowns is given) inequalities, complicated complex fractions.

Judged as a whole, these books are the best texts on high school algebra we have seen, and their use will produce stronger students than we are now receiving from the high schools.

ERNEST B. LYTLE.

*Einführung in die Hauptgesetze der zeichnerischen Darstellungsmethoden.* By Professor ARTUR SCHOENFLIES. B. G. Teubner, Leipzig and Berlin, 1908. iv + 92 pages. 98 figures.

DURING the last few years the need for more systematic and comprehensive instruction in geometric drawing has become much more keenly felt among school and college teachers. While the courses in descriptive geometry for technical students are frequently sufficiently extensive to claim nearly half the time of the student for a year or more, the corresponding training for prospective teachers is usually very inadequate. Among the attempts to supply this need, numerous recent publications of the firm of B. G. Teubner are worthy of careful consideration. The question may be fairly put, whether the emphasis should be placed on the technical details or on the geometric principles underlying them. The little book of Schütte\* is of the first kind; that of Müller and Presler† and also that of Schüssler‡ are much more comprehensive and combine considerable instruction in geometry with the explanations of the constructions. But the book under review puts most of the emphasis on the geometric principles. It is meant for much more mature students than the other books mentioned. The aim is frequently not so much the acquisition of sufficient knowledge or skill to introduce all the geometric details into a figure, but rather the power of making a good illustration by means of a few lines drawn free hand.

After a good discussion of the principles of plane perspective the theorem that any two projective pencils have one right angle formed by corresponding lines is proved in great detail. This theorem is used later. The treatment of the methods of descriptive geometry is brief, but clear. A reader of fair ability and much patience could read these parts profitably

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\* See review in BULLETIN, vol. 14, p. 294.

† See BULLETIN, vol. 10, p. 207.

‡ Reviewed in BULLETIN, vol. 12, p. 361.