§ 3. *Concerning a Substitute for Postulate 1.*

The fact that postulate 1 prevents the set of five postulates from being completely independent suggests the desirability of replacing it by another postulate such that the resulting set shall be completely independent. Evidently the new postulate must assume as a minimum number of elements, a greater number than *two* in order that proposition (2) shall not hold.

If postulate 1 be replaced by the statement that $\mathfrak{R}$ shall have at least *three* distinct elements, the difficulty is not overcome, for there still exist no systems having the characters

$$(-+-+-),\quad (-+---),\quad (--++-),\quad (--+--),$$
$$(---+-),\quad (-----),$$

as is shown by propositions (3) and (4).

It seems rather evident that a completely independent set of postulates could be obtained by postulating as the minimum number of elements of $\mathfrak{R}$ a sufficiently great number. How great this minimum must be has not however been determined by the author.

UNIVERSITY OF SASKATCHEWAN.

ON THE CHARACTERISTICS OF THE PRINCIPAL MANUALS OF ELEMENTARY GEOMETRY PUBLISHED IN ITALY IN THE COURSE OF THE LAST FIFTY YEARS.*

BY PROFESSOR MARIO VECCHI.

IN the first half of the nineteenth century, the Elements of Geometry by A. M. Legendre dominated instruction in that subject in Italy. But about 1860, need for a better exposition was felt, and Italian mathematicians, on the initiation of Luigi Cremona, began to turn to the limpid clearness of Euclid. In the year 1867, the Italian government ordered that geometry should be taught on euclidean lines in the classical gymnasia, and in the same year the well-known

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