# THE CANADA <br> EDUCATIONAL MONTHLY AND SCHOOL MAGAZINE. 

NOVEMBER, 1893.

# DIVISION: A CRITICISM AND A SUGGESTION. 

BY JAS. A. MCLELLAN, M.A., LL.D.,<br>Principal School of Pedagogy, Toronto.

IN the September number of a leading American Journal there is an article by a Professor of Method in Cook County Normal School, in which the writer, following Col. Parker (see pages 105, et seq, Talks on Teaching), discusses the principles of Division, and mercilessly flays any "Doubter" who may venture to question the soundness of his philosophy. I confess myself a doubterone of many it is to be hoped-and I shall state some reasons for the doubts that trouble me. In doing this-in examining the definitions and illustrations in the article referred to -I shall try to set forth some data and inferences which may perhaps contribute somewhat to a true theory of the division process. The article consists (a) of a sort of general introduction, and (b) of an exposition -chiefly by comments on a series of problems-of general principles. I shall (I) devote some attention to (a) and (b) ; and then (J.I) endeavor to advance a common-sense view of the nature of Division.

## I.

(a) "There are," says the Professor, "thousands of children who if asked what we get when we multiply square feet by feet will answer cubic feet because they have never been made to see that when finding the volume of anything, we are simply repeating a certain number of units a certain number of times." He then proceeds to show, rightly enough, "that the child should be clearly taught that there are 'layers' of cubic inches (or feet) repeated a certain number of times."

I remark: (I) No such question should be asked the child-it is the slovenly expression of hazy thought; it is misleading, for it suggests to the child the answer cubic feet. It is a mere catch-question implying an impossible operation; the wrong answer of the child is more than justified by the wrong question of the teacher.
2. "When finding the volume of anything we are simply repeating a

