

Pupils will quickly observe for themselves several points, *e. g.*, that the denominator determines the number of parts into which each unit is to be divided, that we multiply the units by the denominator, that we add to the product the number of similar parts represented by the numerator. In this way they will arrive at a rule inductively. I do not think it is worth your while to make young children put the rule into words and memorise it. At this stage it is sufficient if they can work examples and draw diagrams to illustrate the method.

I shall conclude by giving some guiding principles which may help you in teaching arithmetic. These methods can be confidently recommended, as they have been successfully tried for some years now in our city schools. For a long time we were dissatisfied with results in this subject, but since we have followed the methods that I am about to indicate, a marked improvement has taken place.

1. Give a large amount of mental work, or work that may be done without the use of written figures. Three objects are sought in mental exercises :—

(a) Illustration of principles Your attention has already been drawn to this point, so that no more need be said upon it.

(b) Development of the logical powers. With children from six to ten years of age written problems are out of place.

Mental problems only should be used. Explanatory and analytic statements made by pupils at this stage should be of the simplest character consistent with clearness. They should represent the pupil's thought and be clothed in language of his own choice. The unnecessary repetition of ready-made formulas is to be avoided. Such repetition deadens and bewilders the thinking powers, and results principally in an effort to recall a set form of words. The first training of the child's logical powers is to be looked for in the solution of mental, not of written problems.

(c) Cultivation of the ability to work by short processes. We are all familiar with the child who laboriously adds upon his slate halves and quarters with the aid of his L. C. M. This is the result of defective teaching. Pupils should be trained from the first to manipulate, not only simple numbers, but little fractions at sight, and by the shortest methods. The more instantaneously and intuitively results