

Would the repeated subtraction give you your answer in the end?

Then what is the advantage of division?

This long method of attack should be continued until all the children have grasped the idea of it, and can themselves make the following generalisations.

1. To make a number larger we can add or multiply.

2. To make a number smaller we can subtract or divide.

3. Multiplication is merely a quick way of adding when all the addends are the same.

4. Division is merely a quick way of subtracting the same number over and over again.

When this has gone home to the whole class, it should be enough in attacking the problems to put a few general questions as follows:—

III

Problem:—A cider merchant made 12000 gallons of cider, which he put into casks holding 42 gallons each? How many casks did he fill?

What amounts have you to work with?

What will be the denomination of your answer?

Will there be as many as 12000 casks?

How can you make 12000 less?

Which shall we use, division or subtraction?

If any pupil suggests subtraction, insist on using it first, and division afterwards. There is no better way of checking foolish, parrot-like answers, than by seriously acting upon them. It makes the offender feel foolish, and also helps to teach him that he is responsible for his words. If a pupil suggests division but does not see at once what to divide by, make him use subtraction first. But as soon as he really sees what divisor to use, let him stop subtracting and divide.

So far, so good, but do not stop there. We have not reached independence so long as the teacher is putting the question. It is more than half the battle to make the child put the questions. It is very difficult to make a young child ask himself questions. It is not natural to him. So bring two children up, have your problem put on the board, and make one child question the other. But bear in mind that here it is the questioner who is learning the most, so try to give every child a turn as questioner, *especially the duller ones*. Do not put a dull child on first. If he fails he will discourage the others. Continue using this device of making the children the questioners, until you

feel that your whole class has learnt to attack a simple problem, and could do it perfectly well in your absence.

A word of warning may be useful as to the kind of problems to begin on. Select problems that require only one operation, as is the case with the three problems treated above. Problems involving two or three operations are much more difficult to attack, and should be left until the simpler ones are well understood. A problem such as: "A dealer bought 4 dozen pairs of shoes for \$96.00 and sold them at \$3.00 a pair. What was his profit?" requires three operations,

1. How many pairs of shoes were there?
2. What would they bring at \$3.00 a pair?
3. The difference between the buying and selling prices.

SUGGESTIONS FOR PRIMARY WORK.

One Way of Teaching Letters

I cut pieces of cardboard about three-quarters of an inch square, and write a letter on each side, making a complete alphabet for each child. I rule a page in the child's book in small squares, and on alternate lines write the alphabet. The children place the cardboard letters in the blank squares below the corresponding written letters. When all the squares have been put in their proper places, the child picks up each one, names it, and returns it to the box. The same plan may be used to teach figures and Roman numerals.

Different alphabets are made of different coloured card-board, and a box containing several alphabets is used for building short sentences.

A Device for Teaching New Words.

A box containing a number of small pictures of various common objects (house, box, cup, dog, etc.) pasted on card-board, is kept on a shelf. The name of each object is written or printed below it, and each child is given a picture, and required to write several short sentences about it. As they advance, new pictures are chosen, and harder words added. The pictures may be cut out of advertisements in magazines or catalogues.

For Drill in Silent Reading

A short story, or a number of short sentences, is written on a large sheet of card-board. Then another copy is written and cut up into words.