

The following combinations are taught and illustrated in due order. Including those I have explained, they are :

$$\frac{1}{2} + \frac{1}{2} = 1$$

$$\frac{4}{4} = 1$$

$$\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$$

$$\frac{1}{2} + \frac{3}{4} = 1 + \frac{1}{4}$$

$$1 - \frac{1}{2} = \frac{1}{2}$$

$$\frac{3}{4} = \frac{1}{2} + \frac{1}{4}$$

$$\frac{3}{4} - \frac{1}{2} = \frac{1}{4}$$

$$\frac{5}{4} - \frac{1}{2} = \frac{3}{4}$$

This is as far as I carry the combination of halves and fourths. In the last two, *two* circles are, of course, needed to express five fourths.

Next, I teach eighths. It is not necessary to further illustrate the method, as it follows that used for halves and fourths. The combinations are :

$$\frac{8}{8} = 1$$

$$\frac{4}{8} = \frac{1}{2}$$

$$\frac{2}{8} = \frac{1}{4}$$

$$\frac{3}{8} = \frac{3}{4}$$

$$\frac{1}{2} + \frac{1}{8} = \frac{5}{8}$$

$$\frac{5}{8} - \frac{1}{2} = \frac{1}{8}$$

$$\frac{1}{2} + \frac{3}{8} = \frac{7}{8}$$

$$\frac{1}{4} + \frac{1}{8} = \frac{3}{8}$$

$$\frac{3}{8} - \frac{1}{4} = \frac{1}{8}$$

$$\frac{1}{4} + \frac{3}{8} = \frac{5}{8}$$

$$\frac{5}{8} - \frac{1}{4} = \frac{3}{8}$$

$$\frac{1}{4} + \frac{5}{8} = \frac{7}{8}$$

$$\frac{7}{8} - \frac{1}{4} = \frac{5}{8}$$

$$\frac{7}{8} - \frac{1}{2} = \frac{3}{8}$$

It will be seen that I have selected the odd numbers for practice and use. I give questions in class review that include the simpler combinations, *e. g.*,  $\frac{1}{2} + \frac{3}{4}$ ,  $\frac{1}{2} + \frac{5}{8}$ ; but think it important that only the most difficult should be illustrated. I do not give a lesson in fractions *every* day, but illustrative work is done every day, and a few minutes at the beginning of each new lesson are given to review of facts already taught. To save time I make upon thick, flexible manilla paper, a full set of the combinations to be illustrated, cutting each paper nine inches wide and long enough to allow the circles to be five inches in diameter, the circles and signs are drawn heavily with a crayon pencil, and the sections colored with water color. The work should be so clearly done that a child seated at the rear of the room can see, without fail.

Always have the lesson read aloud by the class before it is copied. I have spoken of the use of *discs* only. Use other models by all means. One noted educator objects to the use of discs as he says the child thinks that one-half means *shape* as well as proportional part, and advises the use of strips of paper. I have never observed that the child was confused by using discs, but think it advisable to use various devices.

I know by experience that the children enjoy the pencil work, and feel that they must gain a correct sense of fractional parts while doing the work. If each child could have water