

how many factors did you fold the halves? ("Into two factors.") I'll put down the factor 2 again. Now fold it for eighths; into how many factors did you fold the fourths? ("Into two factors.") What shall we do then? ("Write down the 2.") Now we'll fold for sixths. Take a piece of paper; fold it into sixths. Into how many factors did you just fold it? ("Two factors.") (Teacher writes the 2.) Then into how many factors did you fold it? ("Three factors.") (Teacher writes down the 3.)

Take a new piece of paper; fold it for the first 2, the halves. Those we make a new fold for we will save; those we do not make a new fold for we will mark out. Did I make a new fold for the halves? ("We did.") Then we'll save it. Fold for the second 2, the fourths. What shall I do? ("Save it.") Open your paper. Fold for the first 2, the halves, in eighths. Did you make a new fold? ("No, sir.") What shall I do? ("Mark it out.") Fold for the second 2, in the eighths. Did you make a new fold? ("No, sir.") What shall I do? ("Mark it out.") Now fold for the other 2, in the eighths. Did you make a new fold? ("We did.") Then we'll leave that factor 2. Open your paper. Now we'll fold for the first part of the sixth. Shall I leave the first factor? (They say no.) Fold for the second in the sixth. What shall I do? ("Leave it.") Then (pointing to the numbers left and to paper) we made a new fold for halves, for a half of that or for eighths, and for a third of that or for twenty-fourths. In what do fourths, eighths and sixths meet? ("In twenty-fourths.")

Show me three-fourths of your paper. How many parts or twenty-fourths in it? (Counting, they find eighteen twenty-fourths.) Three-fourths equals how many twenty-fourths? ("Eighteen twenty-fourths.")

Teacher writes down the eighteen twenty-fourths.) Show me one eighth of the paper. How many of these twenty-fourths in one-eighth? ("Three twenty-fourths.") Show me seven-eighths. How many parts or twenty-fourths in seven-eighths? (Counting they find twenty-one twenty-fourths. Tea-

cher writes down the twenty-one under the eighteen.)

Show me one-sixth of the paper. How many twenty-fourths in one-sixth? ("Four twenty-fourths.") How many parts in three-sixths? (Counting, they find twelve twenty-fourths.) Writing the twelve under the twenty-one, and pointing to the numbers, the teacher says: "If there are eighteen twenty-fourths in three-fourths, twenty-one twenty-fourths in seven-eighths, and twelve twenty-fourths in three-sixths, how many in all?" Answer, "Fifty-one twenty-fourths, or $51 \div 24$, which equals two and three twenty-fourths." $3 \div 24$ (from paper) is same as one-eighth. Sometimes it is best to leave the paper folded while making new folds. The teacher must have worked the lesson so thoroughly before coming to the recitation as to know. This lesson of course is only *outlined*, to be filled in and enlarged at the teacher's pleasure.

At another time the curiosity of a class was excited by asking them how to find the height of a tree, and a few days were given them to think out a method. Nearly all had studied out a partial plan. The experiment was made by driving a large stake in the ground, fifty feet from a tree, to which was fastened a horizontal bar. This was moved to an oblique position, till the eye at one end, the other pointed to the top of the tree. They then measured, by means of a plumb-line, the distance of each end of the bar from the ground. It was found that the upper end was three feet higher than the lower end, and it was ten feet on the ground from where the plumb-line from lower end of the bar touched to that from upper end. Then if for ten feet the elevation was three feet, for fifty feet the elevation would be fifteen feet, the height of the tree.

Another tree was measured by means of its shadow; the shadow of the stick being to the height of the stick as the shadow of the tree is to the height of the tree.

In one class I noticed a pasteboard model of a house with the square inches (representing square feet) marked off on it, with the windows and doors cut out. The pupils measured it and found the cost of plastering.