34.

Equivalent Fractions

Level: Introductory Grade 7

Time: 1 class period (40–50 minutes)

Objective: To write sets of equivalent fractions.

Prerequisite
Skills: Representation of a fraction by illustration; identification of the fraction form of a number
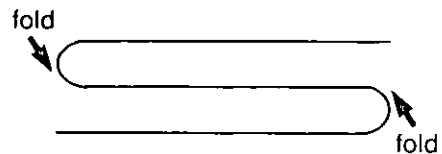
Materials: Precut lengths (1 metre) of adding machine tape

Procedure:
1. Mark the zero (0) point at the left end of the tape and the one (1) at the right end of the tape.

2. Fold tape in half lengthwise.

3. Mark crease with 1/2. Mark ends as 0/2 and 2/2.

4. Fold into thirds (use "S" shape shown).

5. Mark 0/3, 1/3, 2/3, and 3/3 on new folds.

6. Fold into quarters.

7. Mark 0/4, 1/4, 2/4, 3/4, and 4/4.

8. Have students write, on a separate paper, fractions that name the same point (for example, 1/2 = 2/4, 0/2 = 0/3 = 0/4, and so on).

9. Continue folding in this pattern to get sixths, eighths, and twelfths.

10. Have students mark the fractions on the tape after *each* fold, and list on paper all true statements. For example, 1/2 = 2/4 = 3/6 = 4/8, 1/4 = 2/8 = 3/12, 1/3 = 2/6 = 4/12.

11. Write all fractions that appear on the 1/4 fold.

12. Have students guess what other fractions would appear on this fold and state why they would appear at this point.

13. Establish a general rule for writing equivalent fractions from the basic fraction.

14. Test the rule by examining other creases.

15. Ask students to imagine that they are folding paper into sixteenths. Determine which sixteenths would appear at the 1/4 mark, 1/2 mark, and 1/3 mark.

Suggestions:
1. Refolding to identify points may be necessary.

2. Strips should be saved for subsequent activities (ordering fractions, decimals, and percents).

3. Less able students and/or classes may wish to use only 1/2, 1/4, and 1/8.