

Lesson 109

Objective

Students will express whole numbers as fractions and recognize fractions that are equivalent to whole numbers using models and number lines.

Students will divide one or more wholes into a given number of parts and determine the total number of fractional pieces.

Preparation

For each student: Fractions of Circles and Number Lines in Fractional Increments pages (*masters on pages M11 and M28*) and a pair of scissors

TIP: If you cover the number line pages with clear plastic, the students can use dry erase markers to show their work and then erase them with a tissue and reuse them again.

Lesson Plan

Up to now, the students have been working with the parts of one whole with the fractional part problems. This lesson will begin to work with more than one whole.

The important concept is the relationship between the parts and the whole.

Higher level concepts with fractions will come easier to the students if they have learned, for example, that there are always four fourths in one whole and therefore eight fourths in two wholes.

Do #1 with the students. Show them how to use the bottom number line to show that 4 fourths equal 1 whole. Point out that each segment on this number line is $\frac{1}{4}$. The

students can print $\frac{1}{4}$ above each segment and then use a marker or pencil to mark each segment with arrows or colored blocks for a total of 4.

Do #2 - #10 with them. Have the students use the circle pieces to help them solve problems #3 - #10.

Have the student use the middle number line to represent #2 and #8. (If the number lines are not laminated, have the students simply point to them for #2 and write on them for #8.) They can use the top number line to show #5 and #10.

Stretch

Tell the students that they have a balance scale and three identical looking boxes. One of the three boxes weighs more than the other two. They can only use the balance scale one time. How can they locate the heavier box?

Answer: Put two boxes on the scale. If they balance, the heavier box is the one not on the scales. If they do not balance, the heavier one will be the box that is not on either side of the balance scale.