6.2a   Equivalent Fractions

Objectives

♦ Recognize and name equivalent fractions.

Vocabulary

♦ Equivalent fractions

Note

Spend as much time as needed with physical models such as the fraction rectangles or fraction strips. The more students "see" equivalent fractions, the more intuitive fractions will be for them, and the easier it will be to understand the concepts in the next two lessons.

If some students have difficulty understanding why fractions can have different names but be equivalent, such as one half and two fourths, remind them that 1 + 4 is equivalent to 5. Both 1 + 4 and 5 represent the same numerical quantity. Similarly, equivalent fractions represent the same quantity.

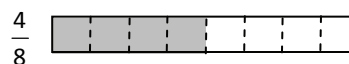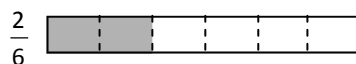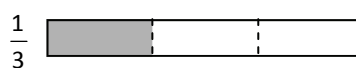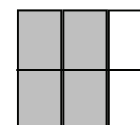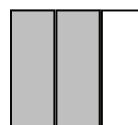| Show equivalent fractions with fraction bars	Text pp. 70-71
Provide students with strips of paper and have them do the activity on this page. To better see the equivalence, you may want to have them use three identical separate strips, fold all three once, shade a half of each, and then fold one twice and another three times and compare all three. They can draw lines at the folds. Draw the results on the board. Ask students to name what fraction of each is shaded. Write their answers. Ask them whether the shaded parts are equal on each of the three strips. They are. Tell them that $\frac{1}{2}$, $\frac{2}{4}$, and $\frac{4}{8}$ are different ways of naming the same fraction of the same whole. They are equal, even though they have different numerators and denominators. They are called *equivalent fractions*. Ask students to compare the numerator to the denominator of each of these three fractions. In each case, the numerator is half of the denominator. This makes sense; one half means we are counting half of the fractional parts. Ask students if $\frac{3}{6}$ is another name for $\frac{1}{2}$. It is. Ask them to name some other fractions that are equivalent to one half.	 $$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$$
You can have students do a similar activity to show that a third is equivalent to two sixths by having students fold a strip of paper into thirds, and then again into half. Guide them in folding the strip into thirds; they want to bring both sides in so that they overlap fully before making a crease.	$$\frac{1}{3} = \frac{2}{6}$$
Show equivalent fractions with squares	
Provide students with square or rectangular pieces of paper. Ask them to fold and draw lines to show thirds. Ask them to shade two parts. Draw the same thing on the board and get students to tell you what fraction is shaded. Then, ask students to fold the rectangle in half the other way (at right angles to the first folds). Show the same thing on the board and get students to tell you	$\frac{2}{3}$ $\frac{4}{6}$ $$\frac{2}{3} = \frac{4}{6}$$