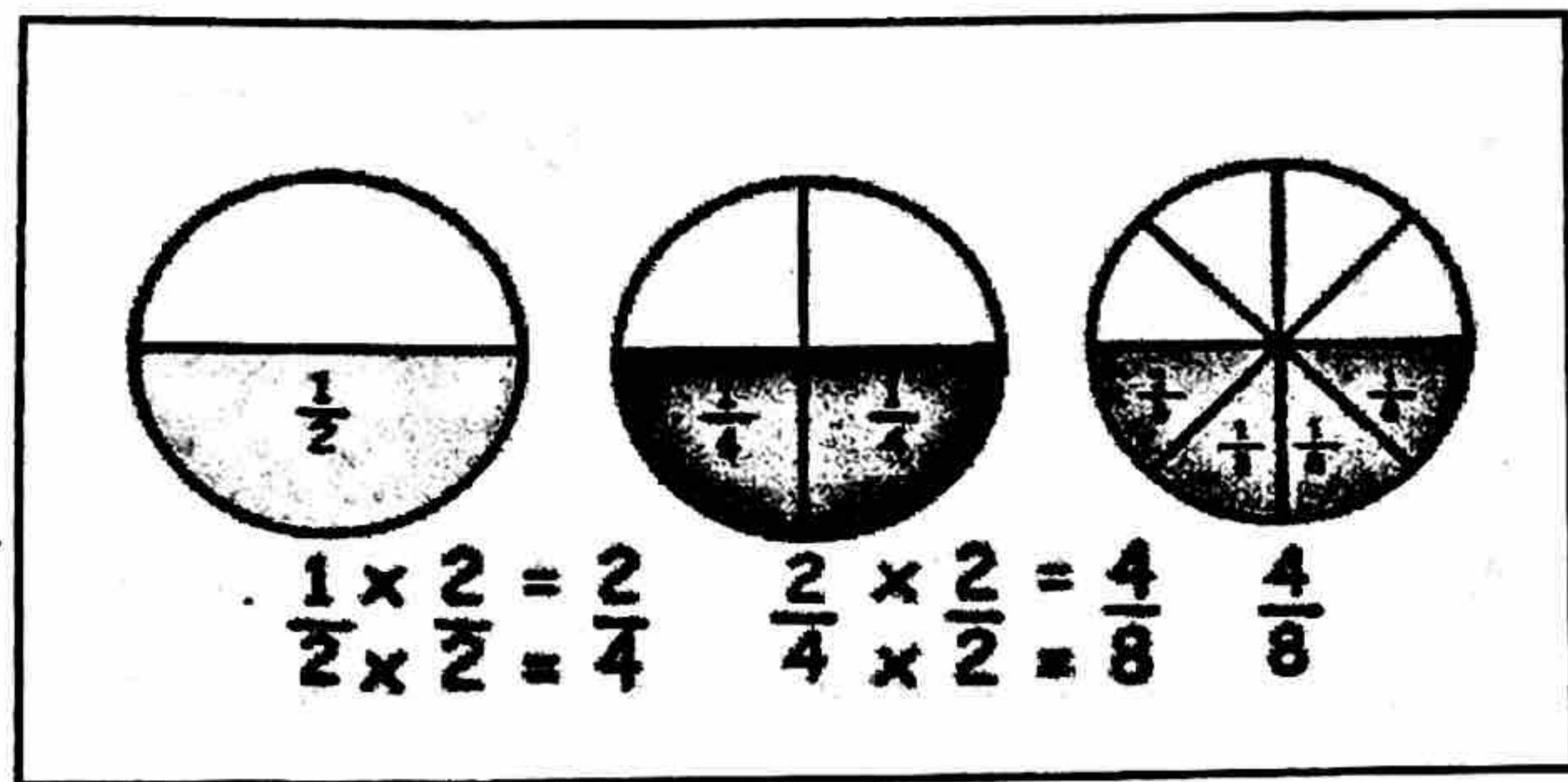
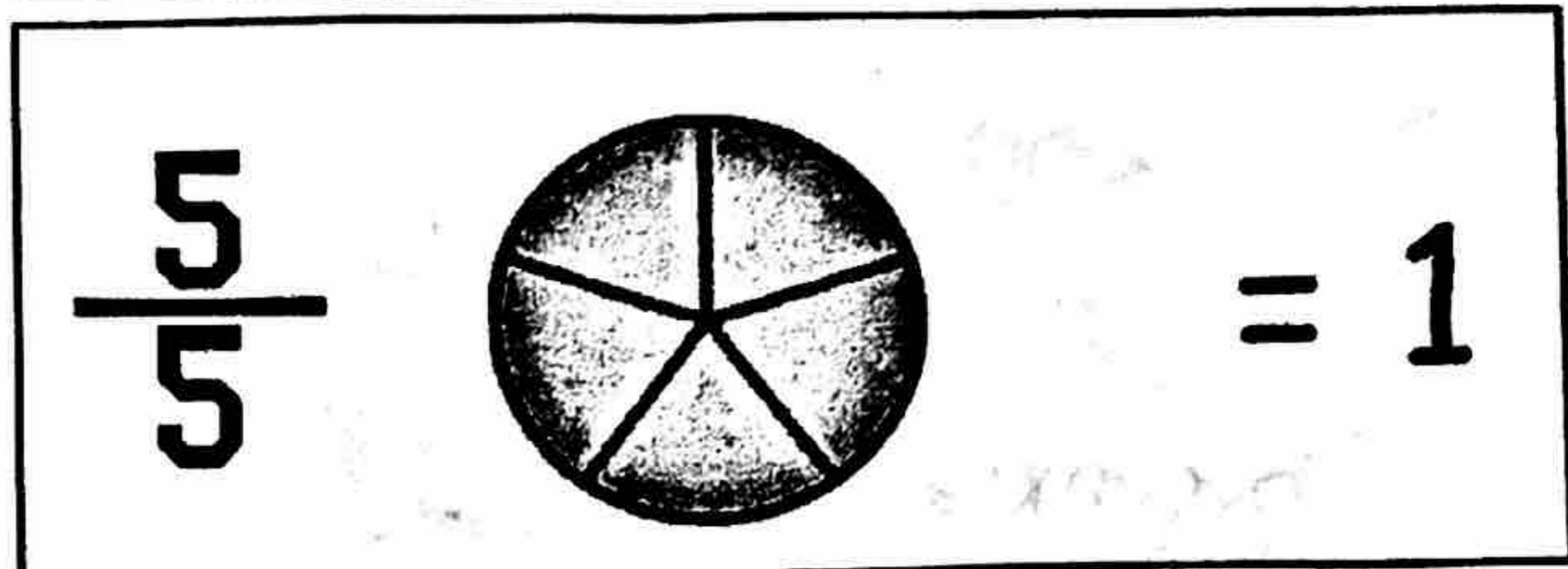


Basic Fraction Review

Fractions are parts of a whole. We use them to write and work with amounts that are less than a whole number (one) but more than zero. The bottom number (denominator) tells how many parts the whole was divided into. The top number (numerator) tells how many of the parts to count.



Simplifying Fractions:

A fraction should be simplified any time both the numerator and denominator can be divided by the same factor.

$$\frac{24}{40} \div \frac{8}{8} = \boxed{\frac{3}{5}}$$

$$\frac{36}{90} \div \frac{9}{9} = \frac{4}{10} \div \frac{2}{2} = \boxed{\frac{2}{5}}$$

$$\frac{64}{120} \div \frac{8}{8} = \boxed{\frac{8}{15}}$$

$$\frac{38}{200} \div \frac{2}{2} = \boxed{\frac{19}{100}}$$

Comparing and Ordering Fractions

Fractions must have the same denominator in order to determine which one is larger or if they are equal. The common denominator is found by identifying the least common multiple of the denominators of the fractions. Then write each fraction as an equivalent fraction with the LCM as the new denominator (this is called finding the Least Common Denominator).

$$\frac{5}{12} > \frac{1}{4} < \frac{2}{3}$$

$$\left. \begin{array}{l} \frac{1}{4} \cdot 3 = \frac{3}{12} \\ \frac{2}{3} \cdot 4 = \frac{8}{12} \end{array} \right\} \text{multiply numerator and denominator by the same factor.}$$

* Order Least to Greatest *

$$1. \quad \frac{3}{4} \quad \frac{2}{5} \quad \frac{5}{8} \quad \frac{1}{2}$$

$$\frac{2}{5}, \frac{1}{2}, \frac{5}{8}, \frac{3}{4}$$

$$\begin{array}{r} 21 \\ \times 4 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 30 \\ \times 3 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 16 \\ \times 5 \\ \hline 80 \end{array}$$

$$\begin{array}{r} 25 \\ \times 8 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 20 \\ \times 2 \\ \hline 40 \end{array}$$

$$\begin{array}{r} 28 \\ \times 3 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 24 \\ \times 7 \\ \hline 168 \end{array}$$

$$\begin{array}{r} 18 \\ \times 5 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 14 \\ \times 6 \\ \hline 84 \end{array}$$

$$\begin{array}{r} 3746 \\ \times 3 \\ \hline 1122 \end{array}$$

$$\frac{1}{6}, \frac{3}{14}, \frac{2}{7}, \frac{1}{3}$$

An improper fraction can be changed to a mixed number by:

- dividing the numerator by the denominator
- putting the remainder over the denominator.

$$\frac{31}{6}$$
 becomes Denominator

$$6 \overline{) 31}$$

$$\underline{30}$$

$$1$$

 whole # \rightarrow 5

$$\boxed{5 \frac{1}{6}}$$

 becomes numerator

$$\frac{25}{6}$$

$$6 \overline{) 25}$$

$$\underline{24}$$

$$1$$

$$\boxed{4 \frac{1}{6}}$$

$$\frac{14}{3}$$

$$3 \overline{) 14}$$

$$\underline{12}$$

$$2$$

$$\boxed{4 \frac{2}{3}}$$

Converting mixed numbers to improper fractions

1. Multiply the whole number part by the fraction's denominator.
2. Add that to the numerator
3. Then write the result on top of the denominator

$$4 \frac{2}{3}$$

$$4 \times 3 = 12$$

$$12 + 2 = 14$$

$$\boxed{\frac{14}{3}}$$

 multiply

 keep same denominator

$$11 \frac{5}{9}$$

$$\boxed{\frac{104}{9}}$$

$$9 \frac{3}{11}$$

$$\boxed{\frac{102}{11}}$$