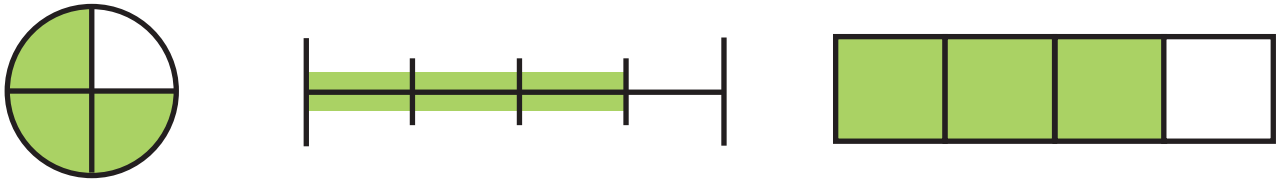
Converting Between Fraction Forms

Fraction Notation → Visual Representation

Visual representations can take many forms, such as portions of a circle or divisions of a line. However, the most efficient way to represent fractions visually is to use pieces of a block, especially for large fractions.

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

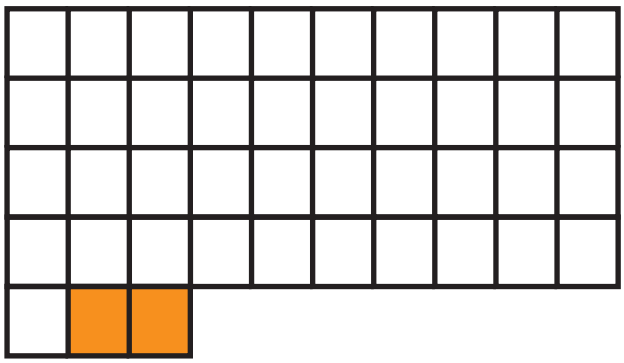
three-fourths



Most Efficient

$$\frac{2}{43}$$

two-forty-thirds



Most Efficient

Converting Between Fraction Forms

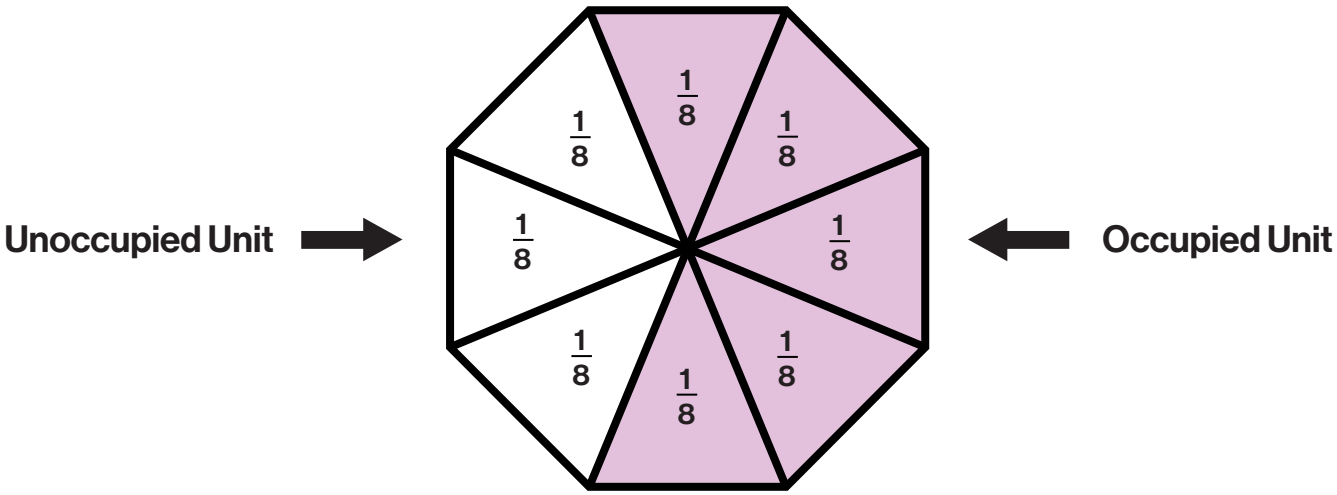
Fraction Notation → Visual Representation

Fractions

Units: Individual portions of a visual representation

Occupied Units: The shaded units

Unoccupied Units: The unshaded units



$$\frac{5}{8}$$

5 ← Total Number of Occupied Units

8 ← Total Number of Units

five-eighths

Converting Between Fraction Forms

Fraction Notation → Visual Representation

Improper Fractions

To represent improper fractions, you must break the improper fraction down into complete fractions until a normal fraction is produced.

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

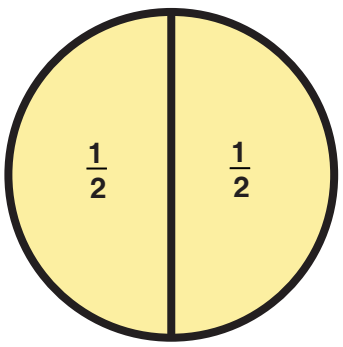
three-halves

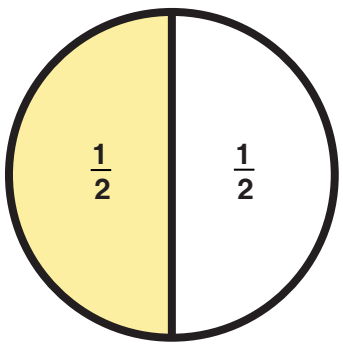
$$\frac{2}{2} + \frac{1}{2}$$

two-halves — complete fraction

one-half — normal fraction

Then, each complete fraction and normal fraction can be represented.





Converting Between Fraction Forms

Fraction Notation → Visual Representation

Improper Fractions

To represent improper fractions, you must break the improper fraction down into complete fractions until a normal fraction is produced.

$$\frac{20}{7}$$

twenty-sevenths

$$\frac{7}{7} + \frac{7}{7} + \frac{6}{7}$$

seven-sevenths	seven-sevenths	six-sevenths
complete fraction	complete fraction	normal fraction

Then, each complete fraction and normal fraction can be represented.

$$1\text{ Unit} = \frac{1}{7}$$

Converting Between Fraction Forms

Fraction Notation → Visual Representation

Complete Fractions

Units: Individual portions of a visual representation

Occupied Units: The shaded units

Unoccupied Units: The unshaded units

Complete fractions are shown by only using occupied units.

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

6 ← Total Number of Occupied Units

6 ← Total Number of Units

six-sixths