Converting Between Fraction Forms
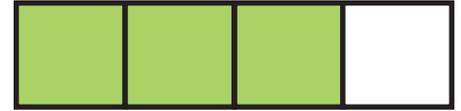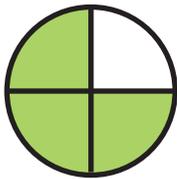
Fraction Notation ➡ Visual Representation

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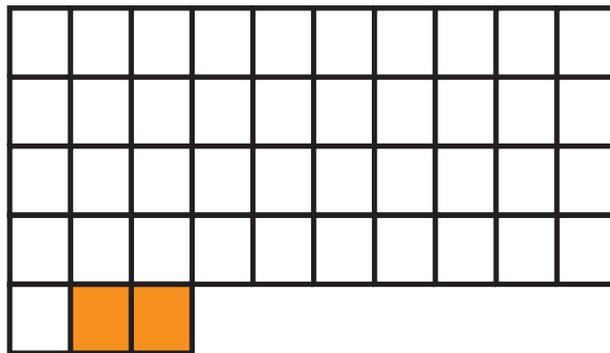
$$\frac{3}{4}$$

three-fourths

Most Efficient

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

two-forty-thirds

Most Efficient
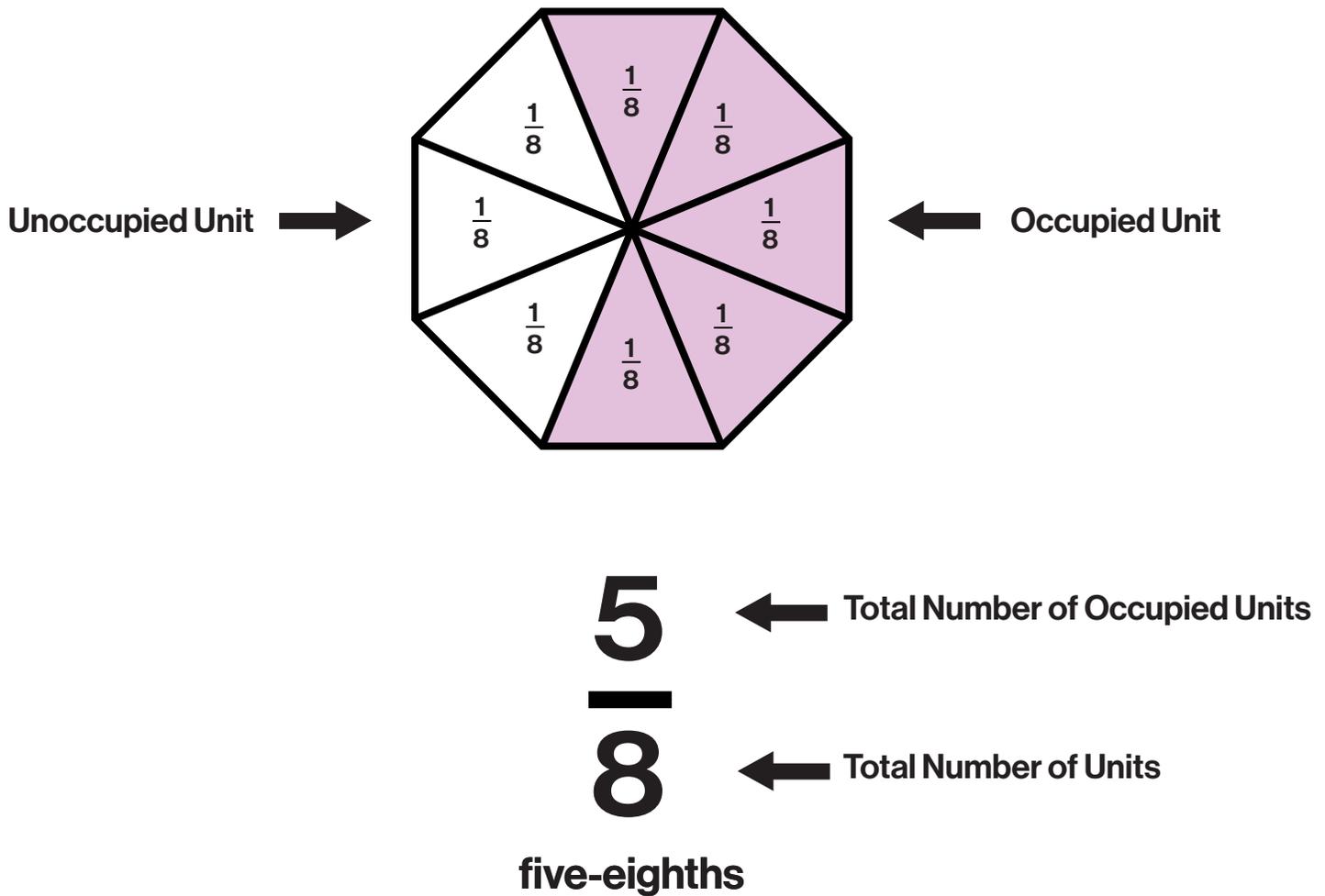
Converting Between Fraction Forms

Fraction Notation ➡ **Visual Representation**

Fractions

Units: Individual portions of a visual representation

Occupied Units: The shaded units

Unoccupied Units: The unshaded units

Unoccupied Unit ➡

$\dfrac{1}{8}$ $\dfrac{1}{8}$ $\dfrac{1}{8}$ $\dfrac{1}{8}$ $\dfrac{1}{8}$ $\dfrac{1}{8}$ $\dfrac{1}{8}$ $\dfrac{1}{8}$

⬅ **Occupied Unit**

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

⬅ Total Number of Occupied Units

⬅ 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

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

two-halves

complete fraction

$+$

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

one-half

normal fraction

Then, each **complete fraction** and **normal fraction** can be represented.
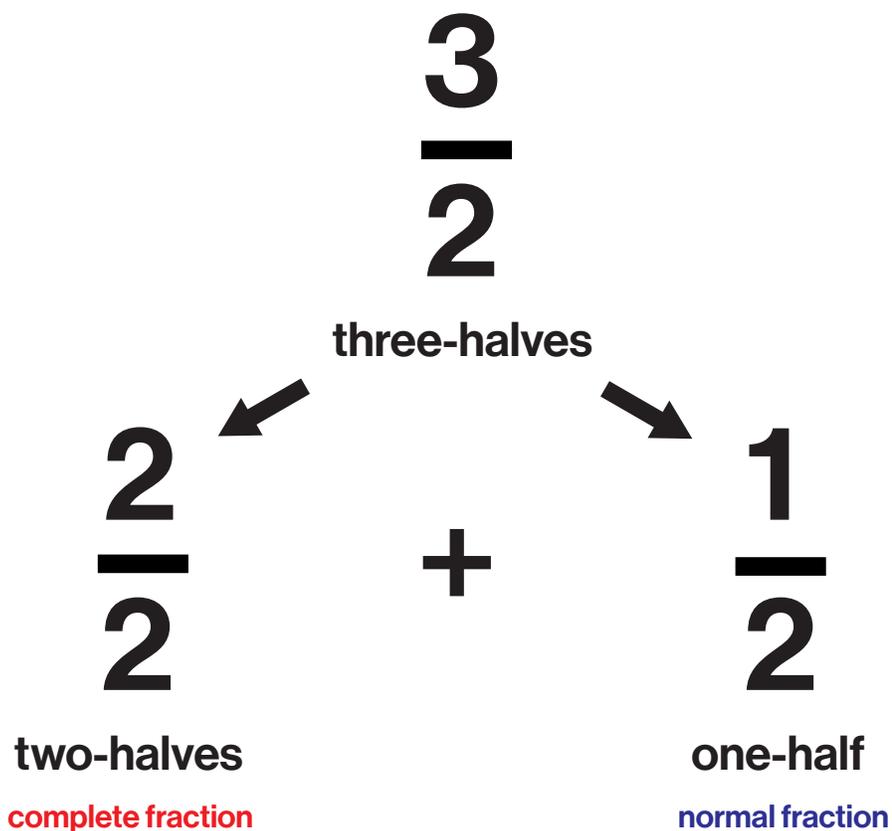
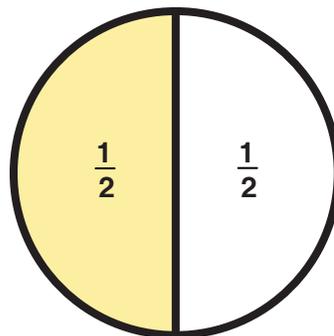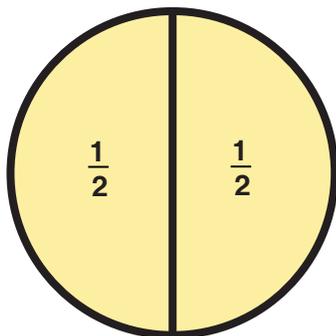# Converting Between Fraction Forms

Fraction Notation $\longrightarrow$ **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

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

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