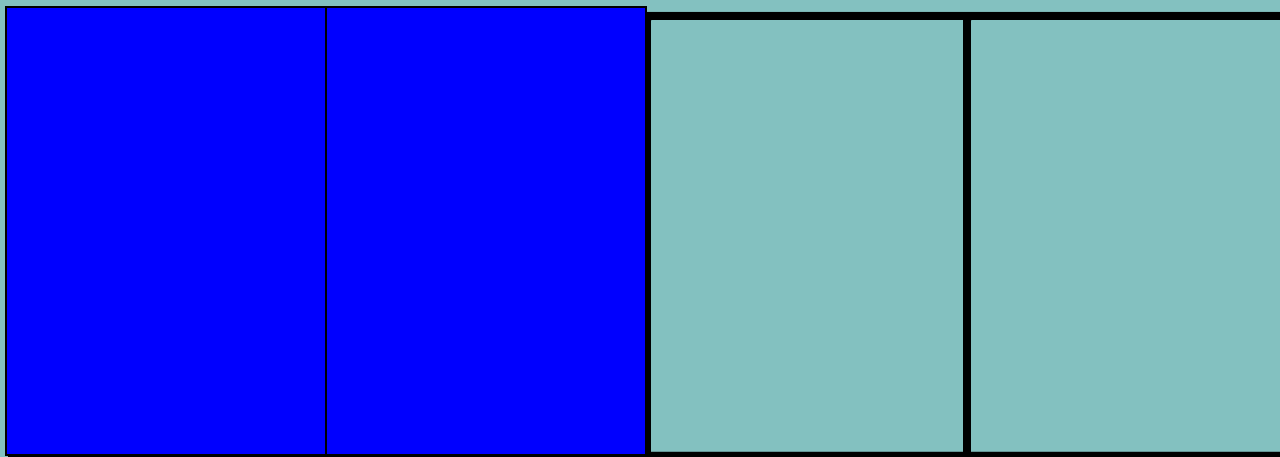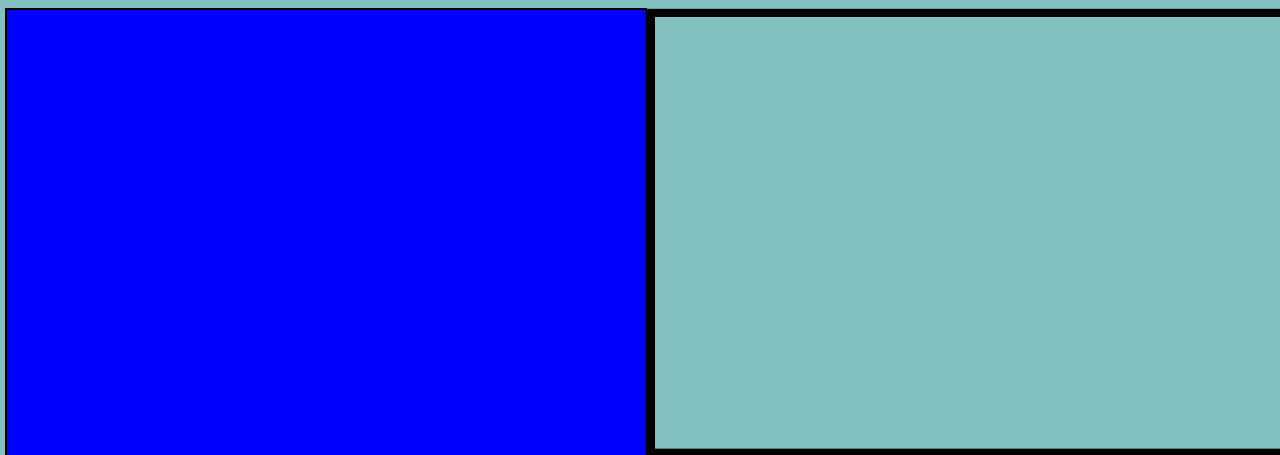# ◼ Simplifying Fractions

Vocabulary

- **Equivalent fractions** – fractions that name the same number.

Equivalent Fractions
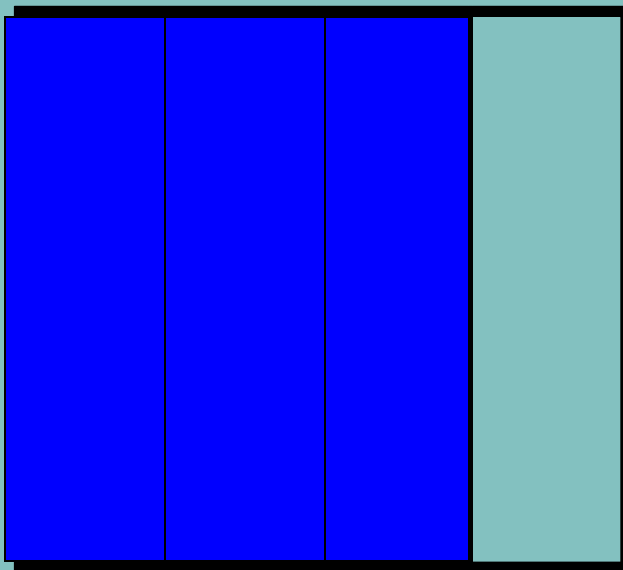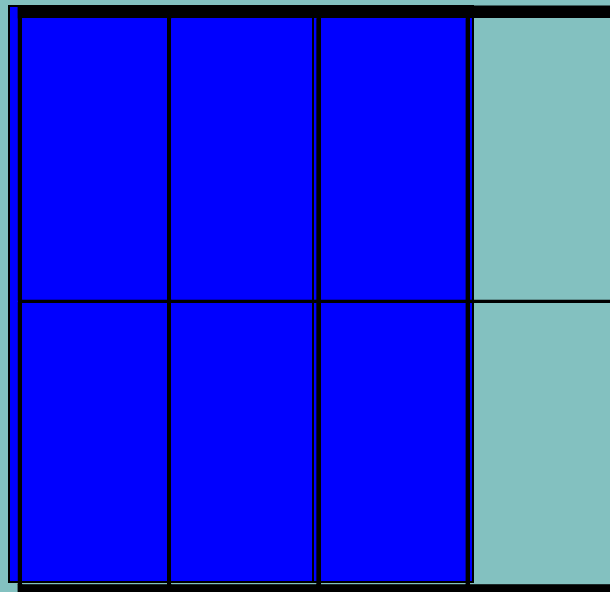

$$\frac{2}{4}$$

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

Equivalent Fractions

$$\frac{3}{4} \quad = \quad \frac{6}{8}$$

Equivalent Fractions

- To find an equivalent fraction you multiply or divide the numerator *and* the denominator by the same number.

Equivalent Fractions

$$\frac{1}{4} = \frac{2}{8}$$

x 2

x 2

Equivalent Fractions

$$\frac{18}{21} = \frac{6}{7}$$

$\div\ 3$

$\div\ 3$

Vocabulary

- **<u>Simplest form</u>** – when the GCF of the numerator and denominator is one.

Rules for Simplifying Fractions

- When the numerator is **1**, the fraction *will not* reduce.

- Example:

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

Rules for Simplifying Fractions

- When the denominator is prime, the fraction *will not* reduce.

- Example:

$$\frac{4}{7} \text{ (prime)}$$

Rules for Simplifying Fractions

- When the numerator is one less than the denominator, the fraction *will not* reduce. (Counting order)

- Example:

$$\frac{4}{5}$$

Rules for Simplifying Fractions

- When the numerator is prime ***and*** does not divide the denominator evenly, the fraction *will not* reduce.

- Example:

$$\frac{5}{8} \quad \text{(prime)}$$

Rules for Simplifying Fractions

■ When the numerator and the denominator are even, the fraction *will always* reduce.

■ Example:

$$\frac{8 \div 2}{10 \div 2} = \frac{4}{5}$$

Rules for Simplifying Fractions

- When the numerator divides the denominator evenly, the fraction *will always* reduce.

- Example:

$$\frac{5}{15} \begin{array}{c} \div 5 \\ \\ \div 5 \end{array} = \frac{1}{3}$$

Rules for Simplifying Fractions

- When the numerator and the denominator can be divided by a common factor, the fraction *will always* reduce.

- Example:
$$\frac{9 \div 3}{12 \div 3} = \frac{3}{4}$$