**Complex Fractions: A complex fraction is a fraction in which the\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are fractions. So it is like a fraction in a fraction. To simplify a complex fraction – you divide the numerator by the denominator (just like we find \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!)**

**Examples – Simplify each complex fraction below:**

**1.** $\frac{\frac{3}{4}}{\frac{5}{6}}$ **2.** $\frac{\frac{2}{5}}{\frac{1}{3}}$ **3.** $\frac{\frac{4}{7}}{\frac{6}{5}}$

**Now let’s calculate a unit rate that involves a complex fraction:**

**Example: It takes Mrs. Stephan** $\frac{1}{4}$ **of an hour to run** $1\frac{1}{2}$ **miles. What is her unit rate in miles per hour?**

**Find the unit rate for each scenario below:**

**1.** $\frac{2}{3}$ **gallon per half hour, find gallons per hour 2. $2.50 per 5 cans, find price per can**

**3.** $\frac{3}{4}$ **cup juice per** $\frac{2}{3}$ **cup sugar, find cups juice per cup sugar 4. 4 candy bars for $5, price per candy bar**

**Table Practice:**

**1. While remodeling his kitchen, Arthur paints the cabinets. He estimates that he paints 30 square feet every half-hour. How many square feet does Arthur paint per hour?**

2. Paige mows $\frac{1}{6} $acre in $\frac{1}{4} $hour. How many acres does Paige mow per hour?

**3. Two containers filled with water are leaking. Container A leaks at a rate of** $\frac{2}{3}$ **gallon every** $\frac{1}{4} $**hour. Container B leaks at a rate of** $\frac{3}{4}$ **gallon every** $\frac{1}{3} $**hour. Determine which container is leaking water more rapidly.**

4. Two liquid storage containers are being filled. Liquid enters the first container at a rate of $\frac{2}{3} $gallon per $\frac{1}{4} $minute. Liquid pours into the second storage container at a rate of $\frac{3}{5} $gallon per $\frac{1}{6} $minute. Determine which container is being filled faster.