

Modeling Fraction Division

$$\frac{1}{2} \boxed{12}$$

$$\frac{1}{2} \cdot \underline{\quad} = 12$$

$$12 \div \frac{1}{2} = 24$$

$$\frac{1}{2} \text{ of } 24 = 12$$

$$\frac{1}{5} \boxed{15}$$

$$\frac{1}{5} \cdot \underline{\quad} = 15$$

$$15 \div \frac{1}{5} = 75$$

$$\frac{1}{5} \text{ of } 75 = 15$$

Sometimes the area model doesn't work nicely

$$\frac{1}{2} \boxed{\frac{3}{4}}$$

$$\frac{1}{2} \cdot \underline{\frac{3}{2}} = \frac{3}{4}$$

$$\frac{3}{4} \div \frac{1}{2} = \frac{3}{2}$$

$$\frac{1}{2} \text{ of } \frac{3}{2} = \frac{3}{4}$$

$$\frac{1}{5} \boxed{\frac{1}{3}}$$

$$\frac{1}{5} \cdot \underline{\frac{5}{3}} = \frac{1}{3} \times \frac{5}{15}$$

$$\frac{1}{3} \div \frac{1}{5} =$$

The common denominator model

$$\begin{array}{c} \text{dividend} \nearrow \\ \frac{1}{3} \div \frac{1}{5} \\ \nwarrow \text{divisor} \\ \frac{5}{15} \div \frac{3}{15} \end{array}$$

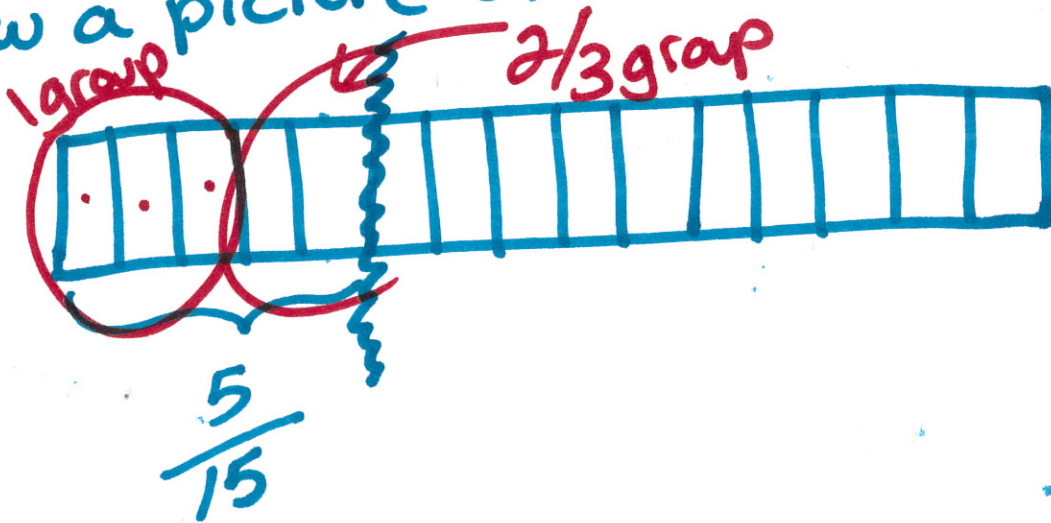
① Rewrite with comm. denom

$$\frac{1}{3} = \frac{5}{15}$$

$$\frac{1}{5} = \frac{3}{15}$$

How many $\frac{3}{15}$ s are in $\frac{5}{15}$ s?

② draw a picture of the dividend



③ Circle groups of the divisor ($\frac{3}{15}$)

$$\frac{1}{3} \div \frac{1}{5} = 1\frac{2}{3}$$

$$\frac{1}{3} \div \frac{1}{5} = \frac{5}{3}$$