

## 2.2.23 Dividing Fractions

**Reciprocal**: Flipping the fraction  $\frac{a}{b}$   $\frac{b}{a}$

a)  $\frac{3}{5} = \frac{5}{3}$     b)  $5 = \frac{1}{5}$     3)  $\frac{7}{2} = \frac{2}{7}$

How to Divide Fractions

1) Keep the first fraction as it is.

2) Change the division sign to multiplication.

3) Flip: Write the second fraction's reciprocal

Ex  $\frac{1}{6} \div \frac{2}{3} = \frac{1}{6} \times \frac{3}{2} = \frac{3}{12} = \frac{1}{4}$

Mixed # make it improper first then proceed

Ex  $2\frac{1}{4} \div \frac{3}{4} = \frac{9}{4} \div \frac{3}{4} = \frac{9}{4} \times \frac{4}{3} = 3$

1)  $\frac{1}{8} \div \frac{1}{4} = \frac{1}{8} \times \frac{4}{1} = \frac{1}{2}$     2)  $\frac{8}{1} \div \frac{2}{5} = \frac{8}{1} \times \frac{5}{2} = 20$

3)  $\frac{5}{8} \div \frac{15}{1} = \frac{5}{8} \times \frac{1}{15} = \frac{1}{24}$     4)  $\frac{5}{6} \div \frac{2}{7} = \frac{5}{6} \times \frac{7}{2} = \frac{35}{12}$

5)  $\frac{1}{3} \div \frac{1}{9} = \frac{1}{3} \times \frac{9}{1} = 3$     6)  $\frac{2}{9} \div \frac{2}{3} = \frac{2}{9} \times \frac{3}{2} = \frac{1}{3}$

7)  $\frac{4}{5} \div \frac{2}{3} = \frac{4}{5} \times \frac{3}{2} = \frac{6}{5} = 1\frac{1}{5}$     ③