

# Rules for Fractions

If working with a MIXED NUMBER, change to an IMPROPER FRACTION first!

Addition: (same denominators)

$$\frac{A}{B} + \frac{C}{B} = \frac{A + C}{B}$$

Subtraction: (same denominators)

$$\frac{A}{B} - \frac{C}{B} = \frac{A - C}{B}$$

Multiplication:

$$\frac{A}{B} \times \frac{C}{D} = \frac{AC}{BD}$$

Addition: (different denominators)

$$\frac{A}{B} + \frac{C}{D} = \frac{AD}{BD} + \frac{BC}{BD} = \frac{AD + BC}{BD}$$

Subtraction: (different denominators)

$$\frac{A}{B} - \frac{C}{D} = \frac{AD}{BD} - \frac{BC}{BD} = \frac{AD - BC}{BD}$$

Division:

$$\frac{A}{B} \div \frac{C}{D} = \frac{A}{B} \times \frac{D}{C} = \frac{AD}{BC}$$