

$$\frac{a}{b} - \frac{c}{d} = \frac{(a * d) - (b * c)}{b * d}$$

$$\frac{a}{b} + \frac{c}{d} = \frac{(a * d) + (b * c)}{b * d}$$

$$\frac{a}{b} * \frac{c}{d} = \frac{a * c}{b * d}$$

$$\frac{a}{b} \div \frac{c}{d} = \frac{a * d}{b * c}$$