Multiplying/Dividing Algebraic Fractions

As your saw at GCSE level, multiplying algebraic fractions is no different to multiply numeric fractions.
You may however need to **cancel common factors, by factorising where possible.**

$$\frac{a}{b} \times \frac{c}{a} = \boxed{}$$

$$\frac{x+1}{2} \times \frac{3}{x^2-1} = \boxed{}$$

To divide by a fraction, **multiply by the reciprocal of the second fraction.**

$$\frac{p}{q} \div \frac{r}{q} = \boxed{}$$

$$\frac{x+2}{x+4} \div \frac{3x+6}{x^2-16} = \boxed{}$$

Test Your Understanding

$$\frac{x+3}{5} \times \frac{10}{x^2-9} = \boxed{}$$

$$\frac{x^2+x}{y} \div \frac{x^2-x-2}{y^2} = \boxed{}$$

Common student "Crime against Mathematics":

$$\frac{x^2+\cancel{y}}{2\cancel{y}} = \frac{x^2}{2} \qquad \boxed{}$$