A few more things to practice... writing Fractions in Reduced Form  $\boxed{\begin{array}{c}1\\\hline \\ x\\\hline \end{array}} + 2 \cdot \frac{x}{x} = \frac{1}{x} + \frac{2x}{x} = \frac{1+2x}{x}$  $\begin{array}{c} (2) \begin{array}{c} X (x+y) \\ \overline{X-Y(x+y)} \end{array} \\ \begin{array}{c} y (x-y) \\ \overline{X+Y(x-y)} \end{array} = \begin{array}{c} \frac{X(x+y) - y(x-y)}{(x+y)(x-y)} \\ \hline (x+y)(x-y) \end{array} \\ \begin{array}{c} x+y(x-y) \\ \overline{X-y(x+y)} \end{array} \\ \begin{array}{c} x^2 + xy - xy + y^2 \\ \overline{X^2-y^2} \end{array} \\ \begin{array}{c} x^2 + y^2 \\ \overline{X^2-y^2} \end{array} \\ \end{array}$  $(3) \underbrace{\chi^{2} - y^{2}}_{2xy} \div \underbrace{y^{2} - \chi^{2}}_{4x^{2}y} = \underbrace{(x + y)(x - y)}_{2xy} \cdot \frac{^{2}4x^{2}y}{(y - x)(y + x)} = \frac{2x}{-(x - y)} = \boxed{-2x}$ Simplifying Compound Fractions  $\underbrace{ \begin{array}{c} \begin{array}{c} \begin{array}{c} X + Y \\ \frac{y}{x} \cdot \frac{y}{x} + \frac{y}{y} \cdot \frac{y}{x} \end{array}}_{y + \frac{y}{y} - \frac{y}{y} + \frac{y}{y} \end{array}} = \underbrace{ \begin{array}{c} X + Y \\ \frac{y}{y} \cdot \frac{y}{x} + \frac{y}{y} \cdot \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} \end{array}} = \underbrace{ \begin{array}{c} X + Y \\ \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} \end{array}} = \underbrace{ \begin{array}{c} X + Y \\ \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} \end{array}} = \underbrace{ \begin{array}{c} X + Y \\ \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} } = \underbrace{ \begin{array}{c} X + Y \\ \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} \end{array}}_{y + \frac{y}{x} - \frac{y}{y} + \frac{y}{x} + \frac{y}{x} + \frac{y}{y} + \frac{y}{x} + \frac{y}{y} + \frac{y}{x} + \frac{y}{y} + \frac{y}{x} + \frac{y}{y} + \frac{y}{x} + \frac{y}{x} + \frac{y}{y} +$  $\boxed{2\frac{b}{ba} + \frac{1}{ba}}_{\frac{b}{b}} = \frac{b+a}{ab} \div \frac{b^2 - a^2}{ab} = \frac{b+a}{ab} \cdot \frac{ab}{(b-a)(b+a)} = \boxed{\frac{1}{b-a}}_{\frac{b}{a}}$  $\underbrace{3_{x+2}^{x+5}}_{x+3} = \frac{12}{x+5} = \frac{2(x+5)-12}{x+5} \cdot \frac{2(x-3)+3}{x-3} = \frac{2x-2}{x+5} \cdot \frac{x-3}{2x-3} = \frac{(2x-2)(x-3)}{(x+5)(2x-3)} = \frac{2x^2-3}{(x+5)(2x-3)} = \frac{2x^2-3}{(x+5)(x+5)} = \frac{2x^2-3}{(x+5)} = \frac{2x^2-3}{(x$