

a Simplify $\frac{8a^2}{12a}$ $\frac{2a}{3}$ cancelling numbers and letters	b Simplify $\frac{3x+6}{3}$ $x+2$ dividing every term on top	c Simplify $\frac{3x+12}{x+4}$ 3 factorise, then cancel a bracket	d Simplify $\frac{x^2+5x+6}{x+2}$ $x+3$ factorise a quadratic to cancel
e Simplify $\frac{x^2-9}{x^2+3x}$ $\frac{x-3}{x}$ factorise the top and the bottom	f Simplify $\frac{2}{x} \times \frac{x^2}{6}$ $\frac{x}{3}$ multiplying algebraic fractions	g Find the LCM of $4a$ and $6a$ $12a$ the LCM of terms with the same letter	h Find the LCM of $4a$ and $6b$ $12ab$ the LCM of terms with different letters
i Write $\frac{x}{3} + \frac{x}{4}$ as a single fraction $\frac{7x}{12}$ adding over a common denominator	j Write $\frac{1}{4a} + \frac{1}{6b}$ as a single fraction $\frac{2a+3b}{12ab}$ adding: letters in the denominators	k Write $\frac{x+1}{2} - \frac{x-3}{3}$ as a single fraction $\frac{x+9}{6}$ subtracting a bracket on top	l Write $\frac{3}{x+2} + \frac{1}{x-1}$ as a single fraction $\frac{4x-1}{(x-1)(x+2)}$ denominators with brackets

The Maths Habit

a Simplify $\frac{8a^2}{12a}$ $\frac{2a}{3}$ cancelling numbers and letters	b Simplify $\frac{3x+6}{3}$ $x+2$ dividing every term on top	c Simplify $\frac{3x+12}{x+4}$ 3 factorise, then cancel a bracket	d Simplify $\frac{x^2+5x+6}{x+2}$ $x+3$ factorise a quadratic to cancel
e Simplify $\frac{x^2-9}{x^2+3x}$ $\frac{x-3}{x}$ factorise the top and the bottom	f Simplify $\frac{2}{x} \times \frac{x^2}{6}$ $\frac{x}{3}$ multiplying algebraic fractions	g Find the LCM of $4a$ and $6a$ $12a$ the LCM of terms with the same letter	h Find the LCM of $4a$ and $6b$ $12ab$ the LCM of terms with different letters
i Write $\frac{x}{3} + \frac{x}{4}$ as a single fraction $\frac{7x}{12}$ adding over a common denominator	j Write $\frac{1}{4a} + \frac{1}{6b}$ as a single fraction $\frac{2a+3b}{12ab}$ adding: letters in the denominators	k Write $\frac{x+1}{2} - \frac{x-3}{3}$ as a single fraction $\frac{x+9}{6}$ subtracting a bracket on top	l Write $\frac{3}{x+2} + \frac{1}{x-1}$ as a single fraction $\frac{4x-1}{(x-1)(x+2)}$ denominators with brackets

The Maths Habit