

Algebra

Simplifying Expressions

P3 - Algebra

Simplify the following algebraic expression:-

$$\begin{aligned} \text{i.} \quad & \frac{6x^4 - 9x^3 + 12x^2}{3x^2} \\ & \Rightarrow \frac{3x^2(2x^2 - 3x + 4)}{3x^2} \\ & \Rightarrow 2x^2 - 3x + 4 \end{aligned}$$

$$\text{ii.} \quad \frac{2}{x+1} \times \frac{2x}{2x+3} = \frac{2(2x)}{(x+1)(2x+3)} = \frac{4x}{(x+1)(2x+3)}$$

$$\text{iii.} \quad \frac{2}{x+1} \div \frac{2x}{2x+3} = \frac{2}{x+1} \times \frac{2x+3}{2x} = \frac{2(2x+3)}{(x+1)2x} = \frac{2x+3}{x(x+1)}$$