

Đề bài

Thực hiện các phép tính

$$\text{a) } \frac{5x-10}{x^2+7} : (2x-4) \qquad \text{b) } (x^2-25) : \frac{2x+10}{3x-7}$$

$$\text{c) } \frac{x^2+x}{5x^2-10x+5} : \frac{3x+3}{5x-5}$$

Đáp án lời giải

$$\begin{aligned} \text{a) } \frac{5x-10}{x^2+7} : (2x-4) &= \frac{5x-10}{x^2+7} : \frac{2x-4}{1} = \frac{5x-10}{x^2+7} \cdot \frac{1}{2x-4} \\ &= \frac{5(x-2) \cdot 1}{(x^2+7) \cdot 2(x-2)} = \frac{5}{2(x^2+7)} \end{aligned}$$

$$\begin{aligned} \text{b) } (x^2-25) : \frac{2x+10}{3x-7} &= \frac{x^2-25}{1} : \frac{2x+10}{3x-7} = \frac{x^2-25}{1} \cdot \frac{3x-7}{2x+10} \\ &= \frac{(x-5)(x+5)(3x-7)}{2(x+5)} = \frac{(x-5)(3x-7)}{2} \end{aligned}$$

$$\begin{aligned} \text{c) } \frac{x^2+x}{5x^2-10x+5} : \frac{3x+3}{5x-5} &= \frac{x^2+x}{5x^2-10x+5} \cdot \frac{5x-5}{3x+3} \\ &= \frac{x(x+1) \cdot 5(x-1)}{5(x-1)^2 \cdot 3(x+1)} = \frac{x}{3(x-1)} \end{aligned}$$