

Đề bài

Dùng quy tắc biến đổi dấu rồi thực hiện các phép tính sau:

a) $\frac{4x+13}{5x(x-7)} - \frac{x-48}{5x(7-x)}$;

b) $\frac{1}{x-5x^2} - \frac{25-15}{25x^2-1}$

Lời giải đáp án

$$\begin{aligned} \text{a) } \frac{4x+13}{5x(x-7)} - \frac{x-48}{5x(7-x)} &= \frac{4x+13}{5x(x-7)} + \frac{x-48}{-5x(7-x)} \\ &= \frac{4x+13}{5x(x-7)} + \frac{x-48}{5x(x-7)} = \frac{4x+13+x-48}{5x(x-7)} \\ &= \frac{5x-35}{5x(x-7)} = \frac{5(x-7)}{5x(x-7)} = \frac{1}{x} \end{aligned}$$

$$\begin{aligned} \text{b) } \frac{1}{x-5x^2} - \frac{25-15}{25x^2-1} &= \frac{1}{x(1-5x)} + \frac{25x-15}{-(25x^2-1)} \\ &= \frac{1}{x(1-5x)} + \frac{25x-15}{1-25x^2} = \frac{1}{x(1-5x)} + \frac{25x-15}{(1-5x)(1+5x)} \\ &= \frac{1+5x+x(25x-15)}{x(1-5x)(1+5x)} = \frac{1+5x+25x^2-15}{x(1-5x)(1+5x)} \\ &= \frac{1-10x+25x^2}{x(1-5x)(1+5x)} = \frac{(1-5x)^2}{x(1-5x)(1+5x)} = \frac{1-5x}{x(1+5x)} \end{aligned}$$