Repetitorium matematiky

$$\left(\frac{1}{x+1}-\frac{2x}{x^2-1}\right)\left(\frac{1}{x}-1\right)=\left(\frac{1}{x+1}-\frac{2x}{(x+1)(x-1)}\right)\left(\frac{1}{x}-1\right)=$$

$$=\left(\frac{1}{x+1}\frac{x-1}{x-1}-\frac{2x}{(x+1)(x-1)}\right)\left(\frac{1}{x}-1\right)=\left(\frac{x-1}{(x+1)(x-1)}-\frac{2x}{(x+1)(x-1)}\right)\left(\frac{1}{x}-1\right)=$$

$$=\left(\frac{-x-1}{(x+1)(x-1)}\right)\left(\frac{1}{x}-\frac{x}{x}\right)=\frac{-x-1}{(x+1)(x-1)}*\frac{1-x}{x}=\frac{-(x+1)}{(x+1)(x-1)}*\frac{1-x}{x}=$$

$$=\frac{-1}{x-1}*\frac{1-x}{x}=\frac{-(1-x)}{(x-1)(x)}=\frac{-(-1)(x-1)}{(x-1)x}=\underline{\underline{\frac{1}{x}}}$$

$$\left(\frac{3}{(x-3)^2}+\frac{1}{x+3}-\frac{6}{x^2-9}\right)*\frac{x^2-6x+9}{2}=$$