



$$5. \left[ \left( \frac{1}{x^2} - \frac{1}{y^2} \right) : \left( \frac{1}{x} - \frac{1}{y} \right) \right] : \frac{x+y}{xy}$$

$$c.e.: x \neq 0; y \neq 0$$

$$y - x \neq 0; y + x \neq 0$$

$$= \frac{y^2 - x^2}{x^2 y^2} : \frac{y-x}{xy} : \frac{x+y}{xy} = \frac{(y-x)(y+x)}{x^2 y^2} \cdot \frac{xy}{y-x} \cdot \frac{xy}{x+y} = 1$$

$$6. \frac{2a+7}{a^3+2a^2-a-2} - \frac{3}{a^2+a-2} + \frac{2}{a^2+3a+2}$$

$$= \frac{2a+7}{a^2(a+2)-(a+2)} - \frac{3}{(a+2)(a-1)} + \frac{2}{(a+2)(a+1)} =$$

$$= \frac{2a+7}{(a+2)(a^2-1)} - \frac{3}{(a+2)(a-1)} + \frac{2}{(a+2)(a+1)} =$$

$$= \frac{2a+7}{(a+2)(a-1)(a+1)} - \frac{3}{(a+2)(a-1)} + \frac{2}{(a+2)(a+1)} =$$

$$c.e.: a+2 \neq 0$$

$$a-1 \neq 0; a+1 \neq 0$$

$$= \frac{2a+7-3(a+1)+2(a-1)}{(a+2)(a-1)(a+1)} = \frac{2a+7-3a-3+2a-2}{(a+2)(a-1)(a+1)} =$$

$$= \frac{a+2}{(a+2)(a-1)(a+1)} = \frac{1}{a^2-1}$$