

$$\frac{x^2 + (\sqrt{5} - \sqrt{2})x - \sqrt{10}}{x^2 - (\sqrt{2} + \sqrt{7})x + \sqrt{14}}$$

$$x^2 + (\sqrt{5} - \sqrt{2})x - \sqrt{10}$$

$$D = (\sqrt{5} - \sqrt{2})^2 + 4\sqrt{5} * 2 = (\sqrt{5} + \sqrt{2})^2$$

$$x_1 = \frac{-(\sqrt{5} - \sqrt{2}) - (\sqrt{5} + \sqrt{2})}{2} = -\sqrt{5}$$

$$x_2 = \frac{-(\sqrt{5} - \sqrt{2}) + (\sqrt{5} + \sqrt{2})}{2} = \sqrt{2}$$

$$x^2 + (\sqrt{5} - \sqrt{2})x - \sqrt{10} = (x + \sqrt{5})(x - \sqrt{2})$$

Аналогично

$$x^2 - (\sqrt{7} + \sqrt{2})x + \sqrt{14} = (x - \sqrt{7})(x - \sqrt{2})$$

В итоге

$$\frac{x^2 + (\sqrt{5} - \sqrt{2})x - \sqrt{10}}{x^2 - (\sqrt{7} + \sqrt{2})x + \sqrt{14}} = \frac{(x + \sqrt{5})(x - \sqrt{2})}{(x - \sqrt{7})(x - \sqrt{2})} \Big|_{x \neq \sqrt{2}} = \frac{(x + \sqrt{5})}{(x - \sqrt{7})} \Big|_{x \neq \sqrt{2}}$$

Не забываем ОДЗ  $x \neq \sqrt{2}$  и  $x \neq \sqrt{7}$