

475. Racionalizirajte nazivnik $\frac{2xy}{x+y+\sqrt{(x+y)^2-2xy}}$.

1. $x+y-\sqrt{x^2+y^2}$ 2. $x+y+\sqrt{x^2+y^2}$ 3. $x-y-\sqrt{x^2+y^2}$
 4. $x-y+\sqrt{x^2+y^2}$

$$\begin{aligned} & \frac{2xy}{x+y+\sqrt{(x+y)^2-2xy}} \cdot \frac{x+y-\sqrt{(x+y)^2-2xy}}{x+y-\sqrt{(x+y)^2-2xy}} = \\ & = \frac{2xy(x+y)-\sqrt{(x+y)^2-2xy}}{(x+y)^2-\left(\sqrt{(x+y)^2-2xy}\right)^2} = \\ & = \frac{2xy\left(x+y-\sqrt{x^2+2xy+y^2-2xy}\right)}{x^2+2xy+y^2-(x+y)^2-2xy} = \\ & = \frac{2xxy\left(x+y-\sqrt{x^2+y^2}\right)}{x^2+2xy+y^2-\left(x^2+2xy+y^2-2xy\right)} = \\ & = \frac{2xy\left(x+y-\sqrt{x^2+y^2}\right)}{x^2+2xy+y^2-x^2-y^2} = \frac{2xy\left(x+y-\sqrt{x^2+y^2}\right)}{2xy} \\ & = x+y-\sqrt{x^2+y^2} \end{aligned}$$