

$$\begin{aligned} & \frac{a\sqrt{a} + b\sqrt{b} + a\sqrt{b} + b\sqrt{a}}{a\sqrt{a} - b\sqrt{b} + a\sqrt{b} - b\sqrt{a}} = \\ & = \frac{\sqrt{a}(a+b) + \sqrt{b}(a+b)}{\sqrt{a}(a-b) + \sqrt{b}(a-b)} = \frac{(a+b)\cancel{(\sqrt{a} + \sqrt{b})}}{(a-b)\cancel{(\sqrt{a} + \sqrt{b})}} = \frac{a+b}{a-b} \end{aligned}$$