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$$\begin{aligned} & \frac{\sqrt{2}(1+\sqrt{2}) - (3+\sqrt{2})}{(3+\sqrt{2})(1+\sqrt{2})} \quad \rightarrow \text{algebra} \\ & = \frac{\sqrt{2} + 2 - 3 - \sqrt{2}}{3 + 3\sqrt{2} + \sqrt{2} + 2} \quad \rightarrow \text{expand} \\ & = \frac{-1}{5 + 4\sqrt{2}} \times \frac{5 - 4\sqrt{2}}{5 - 4\sqrt{2}} \quad \rightarrow \text{rationalize} \\ & = \frac{-5 + 4\sqrt{2}}{25 - 32} \\ & = \frac{-5 + 4\sqrt{2}}{-7} \\ & = \frac{5 - 4\sqrt{2}}{7} \quad \text{Ans} \end{aligned}$$