

Answer on Question #77327 – Math – Calculus

$$z_1 = 1 - i\sqrt{3}$$

$$z_2 = -\sqrt{2} + i\sqrt{2}$$

$$\begin{aligned}\frac{z_1}{z_2} &= \frac{1 - i\sqrt{3}}{-\sqrt{2} + i\sqrt{2}} = \frac{(1 - i\sqrt{3})(-\sqrt{2} - i\sqrt{2})}{(-\sqrt{2} + i\sqrt{2})(-\sqrt{2} - i\sqrt{2})} = \frac{-\sqrt{2} - i\sqrt{2} + i\sqrt{6} - \sqrt{6}}{4} \\ &= -\frac{\sqrt{2} + \sqrt{6}}{4} - i\frac{\sqrt{2} - \sqrt{6}}{4} = \cos 165^\circ + i \sin 165^\circ\end{aligned}$$

Answer: $\cos 165^\circ + i \sin 165^\circ$.