

$$\begin{aligned}x &= \frac{-1 \pm \sqrt{-3}}{2} \\&= \frac{-1 \pm (\sqrt{3} \times \sqrt{-1})}{2} \\&= \frac{-1 \pm (\sqrt{3} \times (\pm i))}{2} \\&= \frac{-1 \pm \sqrt{3}i}{2} \\&= \frac{-1}{2} \pm \frac{\sqrt{3}}{2}i\end{aligned}$$