

$$7) |z| = \sqrt{9+3} = 2\sqrt{3}$$

$$\left\{ \begin{array}{l} \cos \vartheta = \frac{3}{2\sqrt{3}} = \frac{\sqrt{3}}{2} \\ \sin \vartheta = \frac{\sqrt{3}}{2\sqrt{3}} = \frac{1}{2} \end{array} \right. \Rightarrow \vartheta = \frac{\pi}{6}$$

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$$z = 2\sqrt{3} \left(\cos \frac{\pi}{6} + i \sin \frac{\pi}{6} \right)$$

$$z^3 = 8 \cdot (2\sqrt{3})^3 \left(\cos \frac{\pi}{2} + i \sin \frac{\pi}{2} \right) = 8 \cdot (3)^{\frac{3}{2}} \cdot i$$

