

$$\sqrt[3]{1} = ?$$

$$\sqrt[3]{1} = \kappa$$

$$\Rightarrow \kappa^3 = 1$$

$$\Rightarrow \kappa^3 - 1^3 = 0$$

$$\Rightarrow (\underline{\kappa - 1})(\underline{\kappa^2 + \kappa + 1}) = 0$$

$$\therefore \kappa - 1 = 0$$

$$\therefore \boxed{\kappa = 1}$$

$$\kappa^2 + \kappa + 1 = 0$$

$$\Rightarrow \kappa = \frac{-1 \pm \sqrt{1^2 - 4 \cdot 1 \cdot 1}}{2 \cdot 1}$$

$$= \frac{-1 \pm \sqrt{-3}}{2}$$

$$= \left[ \frac{-1 \pm \sqrt{3}i}{2} \right]$$

$$1, \frac{-1 + \sqrt{3}i}{2}, \frac{-1 - \sqrt{3}i}{2}$$