

EQUATION

$$a \cdot x^3 + b \cdot x^2 + c \cdot x + d = 0$$

$$p = -\left(\frac{b^2}{3a^2}\right) + c$$

$$q = \left(\frac{2b^3}{27a^3}\right) - \left(\frac{b \cdot c}{3a^2}\right) + \left(\frac{d}{a}\right)$$

$$K_1 = -\frac{q}{2} + \frac{1}{2} \cdot \sqrt{q^2 + \frac{4p^3}{27}}$$

$$w_1 = \frac{\sqrt{3}i - 1}{2}$$

$$K_2 = -\frac{q}{2} - \frac{1}{2} \cdot \sqrt{q^2 + \frac{4p^3}{27}}$$

$$w_2 = \frac{-\sqrt{3}i - 1}{2}$$

$$X_1 = \sqrt[3]{K_1} + \sqrt[3]{K_2} - \frac{b}{3a}$$

$$X_2 = \sqrt[3]{K_1} \cdot w_1 + \sqrt[3]{K_2} \cdot w_2 - \frac{b}{3a}$$

$$X_3 = \sqrt[3]{K_1} \cdot w_2 + \sqrt[3]{K_2} \cdot w_1 - \frac{b}{3a}$$