

2

$$z^4 = 8 - 8i\sqrt{3} = 16e^{-i\frac{1}{3}\pi}$$

$$z_1 = 2e^{-i\frac{1}{12}\pi}$$

$$z_2 = 2e^{i\frac{5}{12}\pi}$$

$$z_3 = 2e^{-i\frac{7}{12}\pi}, \quad z_4 = 2e^{i\frac{11}{12}\pi}$$