

$$\boxed{\begin{array}{l} 4.17 \\ 8 \end{array}} \quad z^4 = -\frac{3}{2} + i\sin\frac{4\pi}{3} = -\frac{3}{2} + \frac{\sqrt{3}}{2}i = \sqrt{3} \operatorname{cis} 210 \rightarrow z = \sqrt[4]{3} \operatorname{cis} \left(\frac{7\pi}{24} + \frac{\pi k}{2} \right) \quad k=0,1,2,3$$