$\cos z = 4$ $\qquad$ $\cos z = \frac{e^{iz} + e^{-iz}}{2}$

$\frac{e^{iz} + e^{-iz}}{2} = 4$

$e^{iz} + e^{-iz} = 8$

$e^{iz} + \frac{1}{e^{iz}} - 8 = 0$

$e^{iz} = t$

$t + \frac{1}{t} - 8 = 0$

$t^2 - 8t + 1 = 0$

$\Delta = 64 - 4 \cdot 1 \cdot 1 = 60$

$\sqrt{\Delta} = 2\sqrt{15}$

$t_1 = \frac{8 - 2\sqrt{15}}{2} = 4 - \sqrt{15}$ $\qquad$ $t_2 = 4 + \sqrt{15}$

$t_2 = 4 + \sqrt{15}$

$e^{iz} = 4 - \sqrt{15}$ $\qquad$ $e^{iz} = 4 + \sqrt{15}$

$\mathrm{Log}(4 - \sqrt{15}) = e^{iz}$ $\qquad$ $\mathrm{Log}(4 + \sqrt{15}) = e^{iz}$

$|4 - \sqrt{15}| = 4 - \sqrt{15}$ $\qquad$ $|4 + \sqrt{15}| = 4 + 15$

$\left.\begin{array}{l}\cos L = 1 \\ \sin L = 0\end{array}\right\} \to L = 0$ $\qquad$ $\left.\begin{array}{l}\cos L = 1 \\ \sin L = 0\end{array}\right\} \to L = 0$

$\operatorname{Log}(4-\sqrt{15}) = \ln(4-\sqrt{15}) + i2k\pi$ $\log(4+\sqrt{15}) = \ln(4+\sqrt{15}) + i2k\pi$

$iz = \ln(4-\sqrt{15}) + i2k\pi \quad /\cdot i$ $\quad iz = \ln(4+\sqrt{15}) + i2k\pi$

$-z = i\ln(4-\sqrt{15}) - 2k\pi \quad /\cdot(-1)$ $\quad -z = i\ln(4+\sqrt{15}) - 2k\pi$

$z_1 = 2k\pi - i\ln(4-\sqrt{15})$ $\quad z_2 = 2k\pi - i\ln(4+\sqrt{15})$