$\sin z = i$

$$\frac{e^{iz} - e^{-iz}}{2i} = i \quad \Big| \cdot 2i$$

$$e^{iz} - e^{-iz} = -2$$

$e^{iz} = t$

$$t - t^{-1} = -2 \quad \Big| \cdot t$$

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

$\Delta = 2^2 - 4 \cdot 1 \cdot (-1) = 4 + 4 = 8$

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

$t_1 = \frac{-2 - 2\sqrt{2}}{2} = -1 - \sqrt{2}$

$t_2 = -1 + \sqrt{2}$

$e^{iz} = -1 - \sqrt{2}$

$iz = \mathrm{Log}(-1 - \sqrt{2})$ $\qquad |-1-\sqrt{2}| = 1 + \sqrt{2}$

$z = -i\,(\mathrm{Log}(-1 - \sqrt{2}))$ $\qquad \cos z = -1 \\ \sin z = 0 \Big| \Rightarrow z = \pi$

$\mathrm{Log}(-1 - \sqrt{2}) = \ln(1 + \sqrt{2}) + i\pi + i 2k\pi$

$z_1 = -i\left[\ln(1+\sqrt{2}) + i\pi + i2k\pi\right] = -i\ln(1+\sqrt{2}) + \pi + 2k\pi$

$z_2 = -i\,(\mathrm{Log}(-1+\sqrt{2})) = -i\ln(\sqrt{2}-1) + \pi + 2k\pi$