

$$(46) \quad \zeta = \arcsin z \quad z = x + iy \quad \zeta = a + ib$$

$$z = \sin \zeta = \frac{1}{2i} (e^{i\zeta} - e^{-i\zeta})$$

$$e^{i\zeta} - e^{-i\zeta} = 2iz \quad k = e^{i\zeta}$$

$$k - \frac{1}{k} = 2iz$$

$$k^2 - 2izk - 1 = 0$$

$$k_{2} = iz \pm \sqrt{1 - z^2}$$

$$\zeta_2 = -i \cdot \ln |iz \pm \sqrt{1 - z^2}| + \operatorname{Arg}(iz \pm \sqrt{1 - z^2})$$

$$= -i \log (i \frac{z}{\sqrt{1-z^2}} \pm \sqrt{1-z^2})$$