

$$\boxed{53} \quad \sin t + \cos t = 1 \Rightarrow \sin^2 t + 2 \sin t \cos t + \cos^2 t = 1 \Rightarrow 2 \sin t \cos t = 0 \Rightarrow \sin t = 0 \text{ or } \cos t = 0$$

Since  $t_R = \sin^{-1} 0 = 0$  or  $t_R = \cos^{-1} 0 = \frac{\pi}{2}$  and the angle is quadrantal,  $t = \dots, -\frac{3\pi}{2}, 0, \frac{\pi}{2}, 2\pi, \text{ etc.}$

$$t = 2\pi n, \frac{\pi}{2} + 2\pi n \text{ or } t = 360^\circ n, 90^\circ + 360^\circ n \text{ for } n = 0, \pm 1, \pm 2, \pm 3, \dots$$