

S7
8

$$\sin 2x + \cos 2x + \sin x + \cos x + 1 = 0$$

$$\sin 2x + 2\cos^2 x - 1 + \sin x + \cos x + 1 = 0$$

$$2\sin x \cos x + \sin x + 2\cos^2 x + \cos x = 0$$

$$\sin x(2\cos x + 1) + \cos x(2\cos x + 1) = 0$$

$$(\sin x + \cos x)(2\cos x + 1) = 0$$

$$\swarrow$$
$$x = -\frac{\pi}{4} + \pi k$$

$$\searrow$$
$$x = \pm \frac{2\pi}{3} + 2\pi k$$