

$$\frac{d}{dx}(\sin x + \cos x) = \cos x - \sin x \stackrel{(6)}{=} 0$$

$$\cos x = \sin x \Rightarrow \tan x = 1$$

$$\Rightarrow x = \pi/4, 5\pi/4, \dots, (n + 1/4)\pi$$

$$\frac{d^2}{dx^2}(\sin x + \cos x) = -\sin x - \cos x$$

$$-\sin(n + 1/4)\pi \neq \cos(n + 1/4)\pi$$

$$= -\frac{1}{\sqrt{2}} - \frac{1}{\sqrt{2}} = -\sqrt{2} \quad n \text{ even}$$

$$n \text{ even} \Rightarrow \text{max}$$

$$\underline{\underline{OT}} \quad +\frac{1}{\sqrt{2}} + \frac{1}{\sqrt{2}} = \sqrt{2} \quad n \text{ odd}$$

$$n \text{ odd} \Rightarrow \text{min}$$