

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

$$x^2 + 1 = t$$

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

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

$$\cos^2 t + \cos t = 0$$

$$\cos t = g$$

$$g^2 + g = 0$$

$$g(g + 1) = 0$$

$$g = 0$$

$$g = -1$$

$$\cos t = 0$$

$$t = \pi/2 + \pi k$$

$$\cos t = -1$$

$$t = \pi + 2\pi k$$

$$x^2 + 1 = \pi/2 + \pi k$$

$$x = \sqrt{\pi/2 + \pi k - 1}, \quad k \geq 0$$

$$x^2 + 1 = \pi + 2\pi k$$

$$x = \sqrt{\pi + 2\pi k - 1}, \quad k \geq 0$$