

$$3) \sqrt{3} \cos 3x + \sin 3x = \sqrt{2}$$

$$4) \sin x + \cos x = \sqrt{2} \sin 5x$$

$$5) (\sqrt{3} - 1) \sin x - (\sqrt{3} + 1) \cos x + \sqrt{3} - 1 = 0$$

$$6) \sqrt{3} \sin 2x + \sin\left(\frac{\pi}{2} + 2x\right) = 1$$

$$4) \cos x - \sqrt{3} \sin x = 2 \cos\left(\frac{\pi}{3} - x\right)$$

$$5) \sin 5x + \cos 5x = \sqrt{2} \cos 13x$$

$$6) (3\cos x - 4\sin x - 6)^2 + 2 = -3(3\cos x - 4\sin x - 6)$$

Bài 3. Giải các phương trình sau:

1) $3\sin x - 2\cos x = 2$

$$2) \sqrt{3} \cos x + 4 \sin x - \sqrt{3} = 0$$

$$2) \cos x + 4 \sin x = -1$$

$$3) 2 \sin x - 5 \cos x = 5$$

Bài 4. Giải các phương trình sau:

$$1) 2 \sin \left(x + \frac{\pi}{4} \right) + \sin \left(x - \frac{\pi}{4} \right) = \frac{3\sqrt{2}}{2}$$

