

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

$$4) \sin^2 x + \sin 2x - 2\cos^2 x = \frac{1}{2}$$

$$5) 2\sin^2 x + (3 + \sqrt{3})\sin x \cos x + (\sqrt{3} - 1)\cos^2 x = -1$$

$$6) 5\sin^2 x + 2\sqrt{3}\sin x \cos x + 3\cos^2 x = 2$$

$$7) 3\sin^2 x + 8\sin x \cos x + 4\cos^2 x = 0$$

$$8) (\sqrt{2} - 1)\sin^2 x + \sin 2x + (\sqrt{2} - 1)\cos^2 x = \sqrt{2}$$

$$9) (\sqrt{3} + 1)\sin^2 x - 2\sqrt{3}\sin x \cos x + (\sqrt{3} - 1)\cos^2 x = 0$$

$$10) 3\cos^4 x - 4\sin^2 x \cos^2 x + \sin^4 x = 0$$

