

$$\sqrt{\frac{1+2x\sqrt{1-x^2}}{2}} + 2x^2 = 1$$

$$\frac{1+2x\sqrt{1-x^2}}{2} = (1-2x^2)^2$$

$$2x\sqrt{1-x^2} = 1 - 8x^2 + 8x^4$$

$$2x\sqrt{1-x^2} = 1 - 2 \cdot 4x^2(1-x^2)$$

$$\sqrt{\frac{1+2x\sqrt{1-x^2}}{2}} + 2x^2 = 1$$

$$x^2 \leq \frac{1}{2}$$

$$x^{2-\frac{1}{2}} \leq 0$$

$$(x-\frac{1}{\sqrt{2}})(x+\frac{1}{\sqrt{2}}) \leq 0$$

$$x \in [-\frac{1}{\sqrt{2}}; \frac{1}{\sqrt{2}}]$$

$$2t^2 + t - 1 = 0 \quad t_{1,2} = \frac{1}{2}, -1$$

$$2x\sqrt{1-x^2} = \frac{1}{2}$$

$$x = \pm \sqrt{\frac{2 \pm \sqrt{3}}{4}}$$

$$x > 0$$

$$x = \sqrt{\frac{2 + \sqrt{3}}{4}}$$

$$2x\sqrt{1-x^2} = -1$$

$$x = \pm \frac{1}{\sqrt{2}}$$

$$x < 0$$

$$x = -\frac{1}{\sqrt{2}}$$

$$\frac{2 + \sqrt{3}}{4} \vee \frac{1}{2}$$

$$2 + \sqrt{3} \vee 2$$

$$x = \sqrt{\frac{2 - \sqrt{3}}{4}} \quad x = -\frac{1}{\sqrt{2}}$$