

$$7/4 * \cos(x/4) = \cos^3(x/4) + \sin(x/2) \quad | *4$$

$$7 * \cos(x/4) = 4 * \cos^3(x/4) + 4 * \sin(x/2)$$

$$7 * \cos(x/4) = 4 * \cos^3(x/4) + 8 * \sin(x/4) \cos(x/4)$$

$$7 * \cos(x/4) - 4 * \cos^3(x/4) - 8 * \sin(x/4) \cos(x/4) = 0$$

$$\cos(x/4) * (7 - 4 * \cos^2(x/4) - 8 * \sin(x/4)) = 0$$

$$\cos(x/4) = 0$$

$$x/4 = \pi/2 + \pi k$$

$$\underline{x = 2\pi + 4\pi k}$$

$$7 - 4 * \cos^2(x/4) - 8 * \sin(x/4) = 0$$

$$7 - 4 * (1 - \sin^2(x/4)) - 8 * \sin(x/4) = 0$$

$$\sin(x/4) = t$$

$$7 - 4(1 - t^2) - 8t = 0$$

$$4t^2 - 8t + 3 = 0$$

$$t = 1/2 \quad t = 3/2$$

$$\sin(x/4) = 1/2$$

$$x = 2\pi/3 + 8\pi k$$

$$x = 10\pi/3 + 8\pi k$$

$$\text{ОТВЕТ } \{ \underline{x = 2\pi + 4\pi k} \} \cup \{ 2\pi/3 + 8\pi k \} \cup \{ 10\pi/3 + 8\pi k \}$$

