

$$\sin^4 x + \sin^4(x+P/4) + \sin^4(x-P/4)=9/8$$

$$((1-\cos 2x)/2)^2 + ((1-\cos 2(x+P/4))/2)^2 + ((1-\cos 2(x-P/4))/2)^2 = 9/8$$

$$(1-2\cos 2x + \cos^2 2x)/4 + ((1-\cos(2x+P/2))/2)^2 + ((1-\cos(2x-P/2))/2)^2 = 9/8$$

$$(1-2\cos 2x + \cos^2 2x)/4 + ((1+\sin 2x)/2)^2 + ((1-\sin 2x)/2)^2 = 9/8$$

$$(1-2\cos 2x + \cos^2 2x)/4 + (1+2\sin 2x + \sin^2 2x)/4 + (1-2\sin 2x + \sin^2 2x)/4 = 9/8$$

$$2(1-2\cos 2x + \cos^2 2x) + 2(1+2\sin 2x + \sin^2 2x) + 2(1-2\sin 2x + \sin^2 2x) = 9$$

$$2-4\cos 2x + 2\cos^2 2x + 2+4\sin 2x + 2\sin^2 2x + 2-4\sin 2x + 2\sin^2 2x = 9$$

$$6-4\cos 2x + 2\cos^2 2x + 4\sin^2 2x = 9$$

$$6-4\cos 2x + 2\sin^2 2x = 7$$

$$2\sin^2 2x - 4\cos 2x = 1$$

$$2-2\cos^2 2x - 4\cos 2x = 1$$

$$\cos 2x = t$$

$$-2t^2 - 4t + 1 = 0$$

$$2t^2 + 4t - 1 = 0$$

$$D/4 = 4 + 2 = 6$$

$$x_1 = (-2 + \sqrt{6})/2$$

$$x_2 = (-2 - \sqrt{6})/2$$

$$\cos 2x = (-2 - \sqrt{6})/2$$

cos- не существует

$$\cos 2x = (-2 + \sqrt{6})/2$$

$$x = \pm \arccos((-2 + \sqrt{6})/2)/2 + pk$$

$$\cos(2x + P/2) = -\sin(2x)$$

$$\cos(2x - P/2) = \sin(2x)$$

Ответ: $\pm \arccos((-2 + \sqrt{6})/2)/2 + pk$

