

$$\sin 2x \cdot \sin(x + P/4) = 1$$

$$\sin 2x = 1$$

$$\sin(x + P/4) = 1$$

$$x = P/4 + Pk \quad = P/4 + 2Pn$$

$$x = P/4 + 2Pn$$

$$k = 2n$$

$$\sin 2x = -1$$

$$\sin(x + P/4) = -1$$

$$x = -P/4 + Pk$$

$$x = -3P/4 + 2Pn$$

решений нет

Ответ: $P/4 + 2Pn$

$$\frac{1}{2}(\cos(x - P/4) - \cos(3x + P/4)) = 1$$

$$\cos(x - P/4) - \cos(3x + P/4) = 2$$

$$\cos(x - P/4) = 1$$

$$x = P/4 + 2Pk$$

$$\cos(3x + P/4) = -1$$

$$x = P/4 + 2/3Pn \quad === \quad P/4 + 2Pk$$

$$3k = n$$

Ответ: $P/4 + 2Pk$