

$$\sin^6 x + \cos^6 x > \frac{5}{8}$$

$$a^3 + b^3 = (a+b)(a^2 - ab + b^2)$$

$$(\sin^2 x + \cos^2 x)(\sin^4 x + \cos^4 x - (\cos x \sin x)^2) > \frac{5}{8}$$

$$\sin^4 x + \cos^4 x - (\cos x \sin x)^2 > \frac{5}{8}$$

$$1 - 2\sin^2 x \cos^2 x - (\cos x \sin x)^2 > \frac{5}{8}$$

$$1 - 3\sin^2 x \cos^2 x > \frac{5}{8}$$

$$3\sin^2 x \cos^2 x < \frac{3}{8}$$

$$4\sin^2 x \cos^2 x < \frac{4}{8}$$

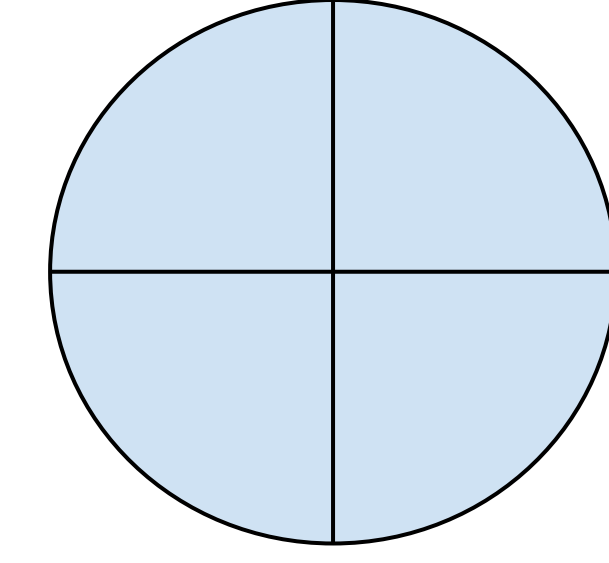
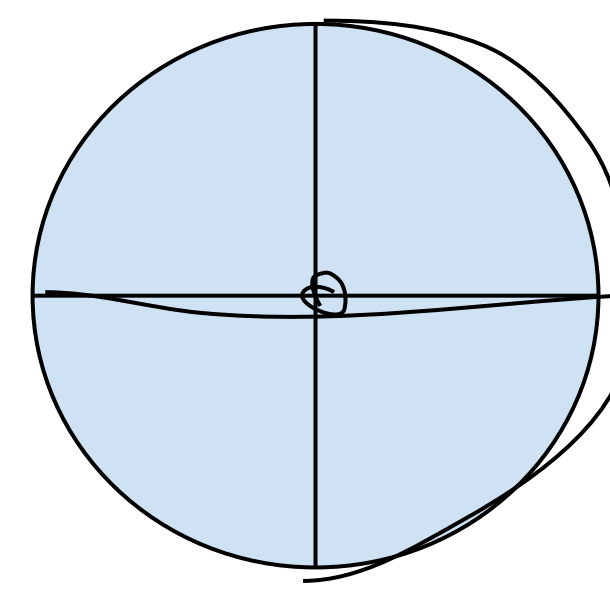
$$\sin^2 2x < \frac{1}{2}$$

$$1 - \cos 4x < 1$$

$$\cos 4x > 0$$

$$-\frac{\pi}{2} + 2\pi k < 4x < \frac{\pi}{2} + 2\pi k$$

$$x \in (-\frac{\pi}{8} + \frac{\pi k}{2}; \frac{\pi}{8} + \frac{\pi k}{2})$$



**НЕРАВЕНСТВО
СУММА 6Х
СТЕПЕНЕЙ**

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