

Функция $y=\sin x$, её свойства и график

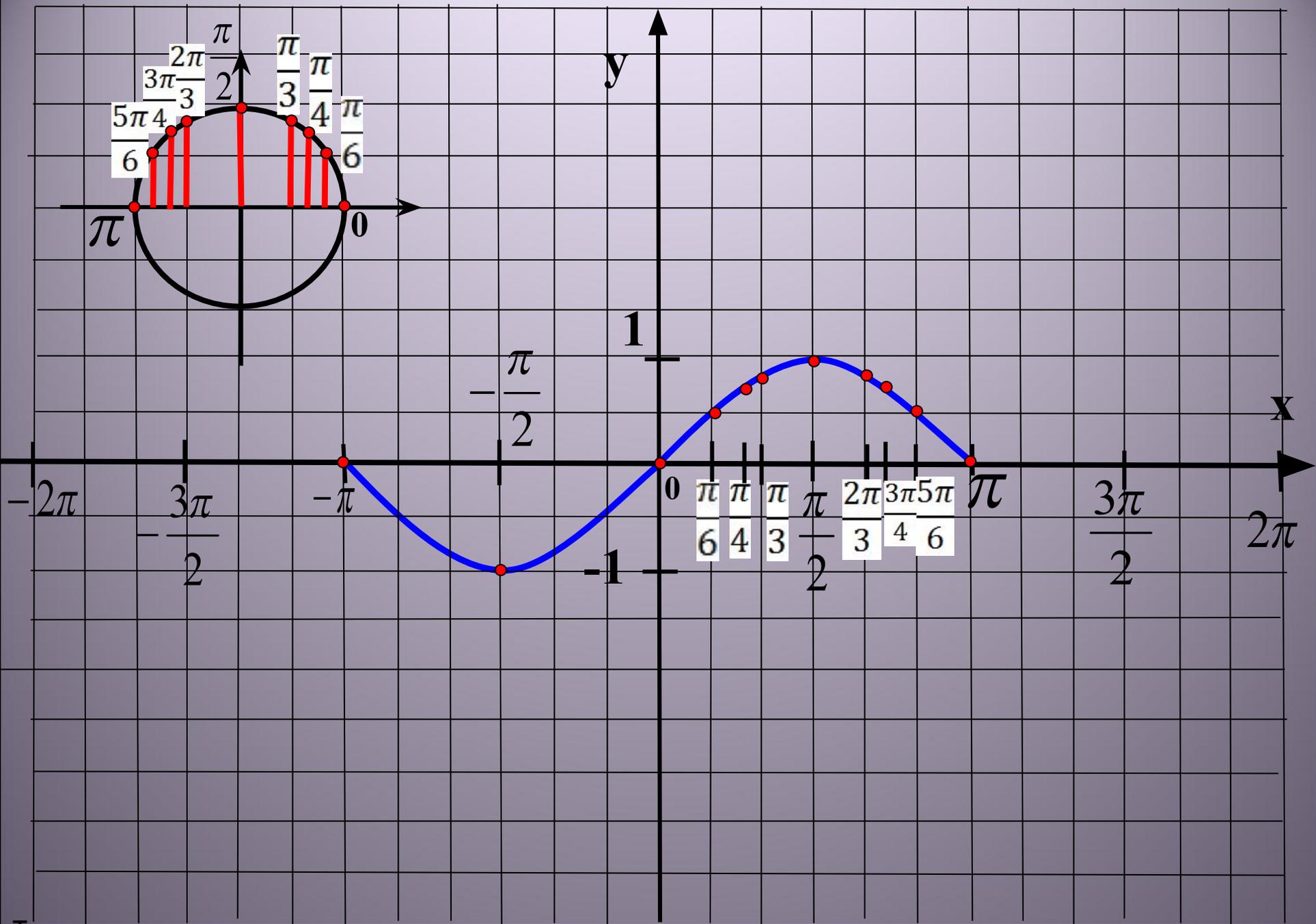
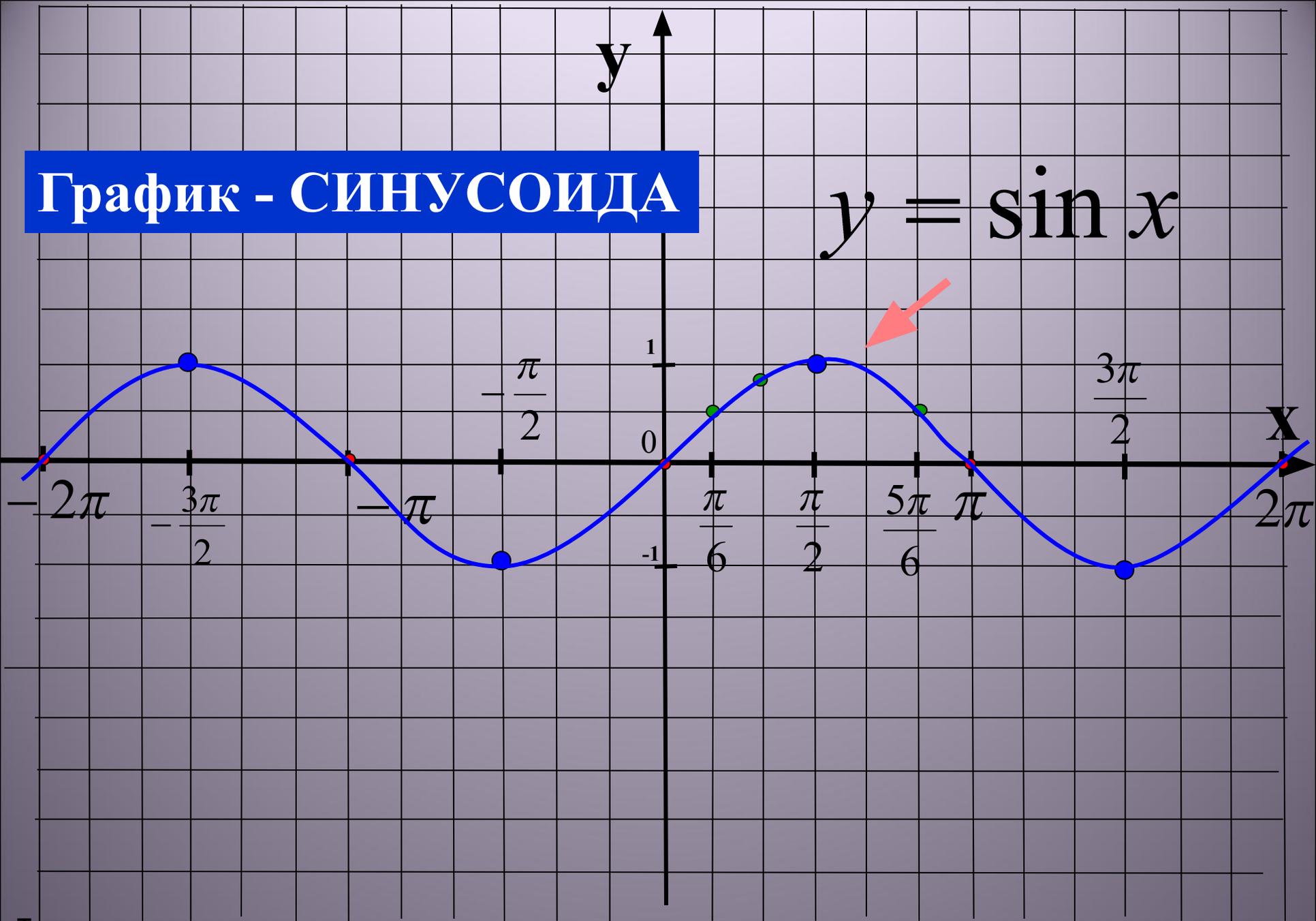
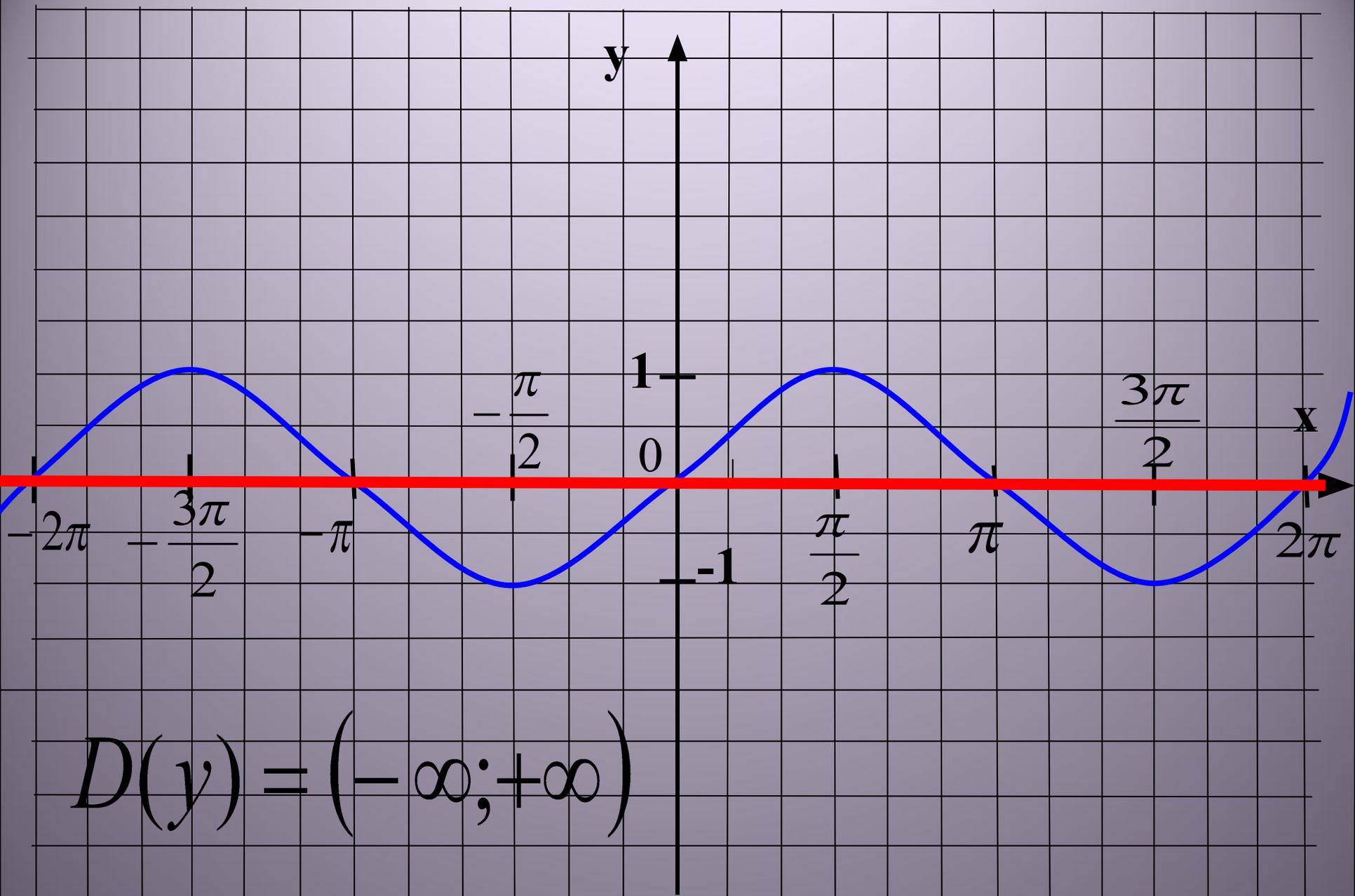


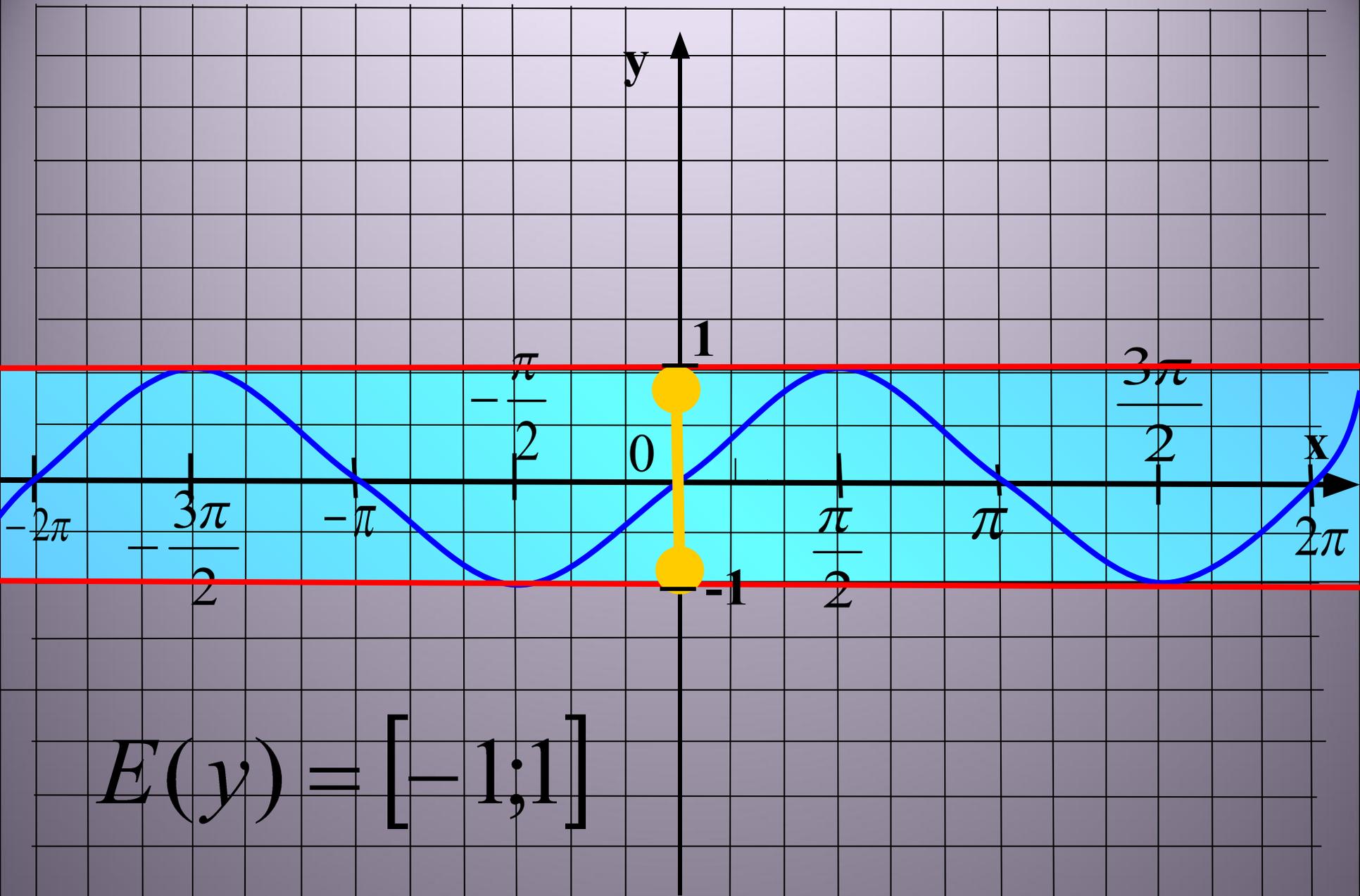
График - СИНУСОИДА

$$y = \sin x$$



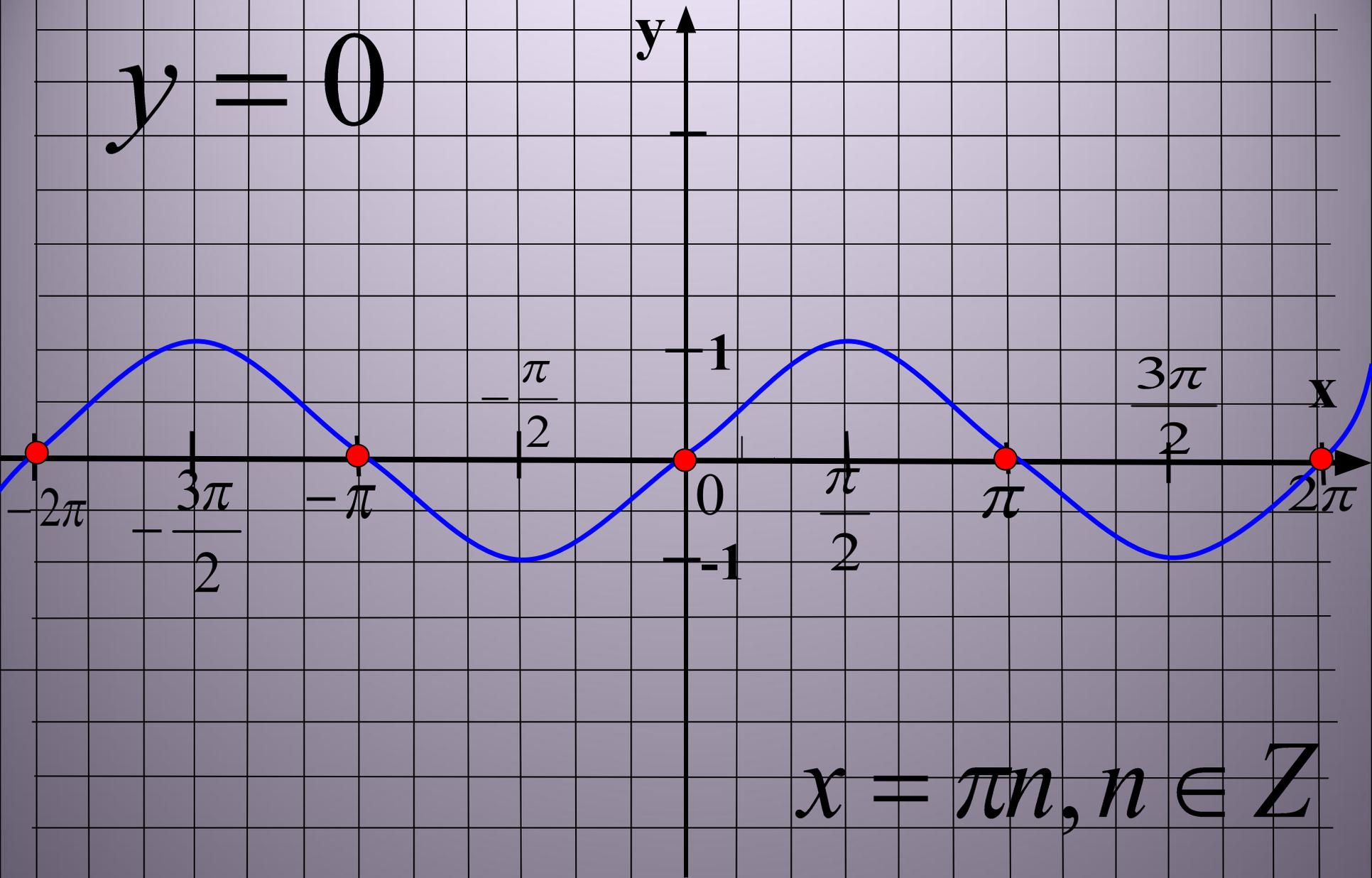


$$D(y) = (-\infty; +\infty)$$

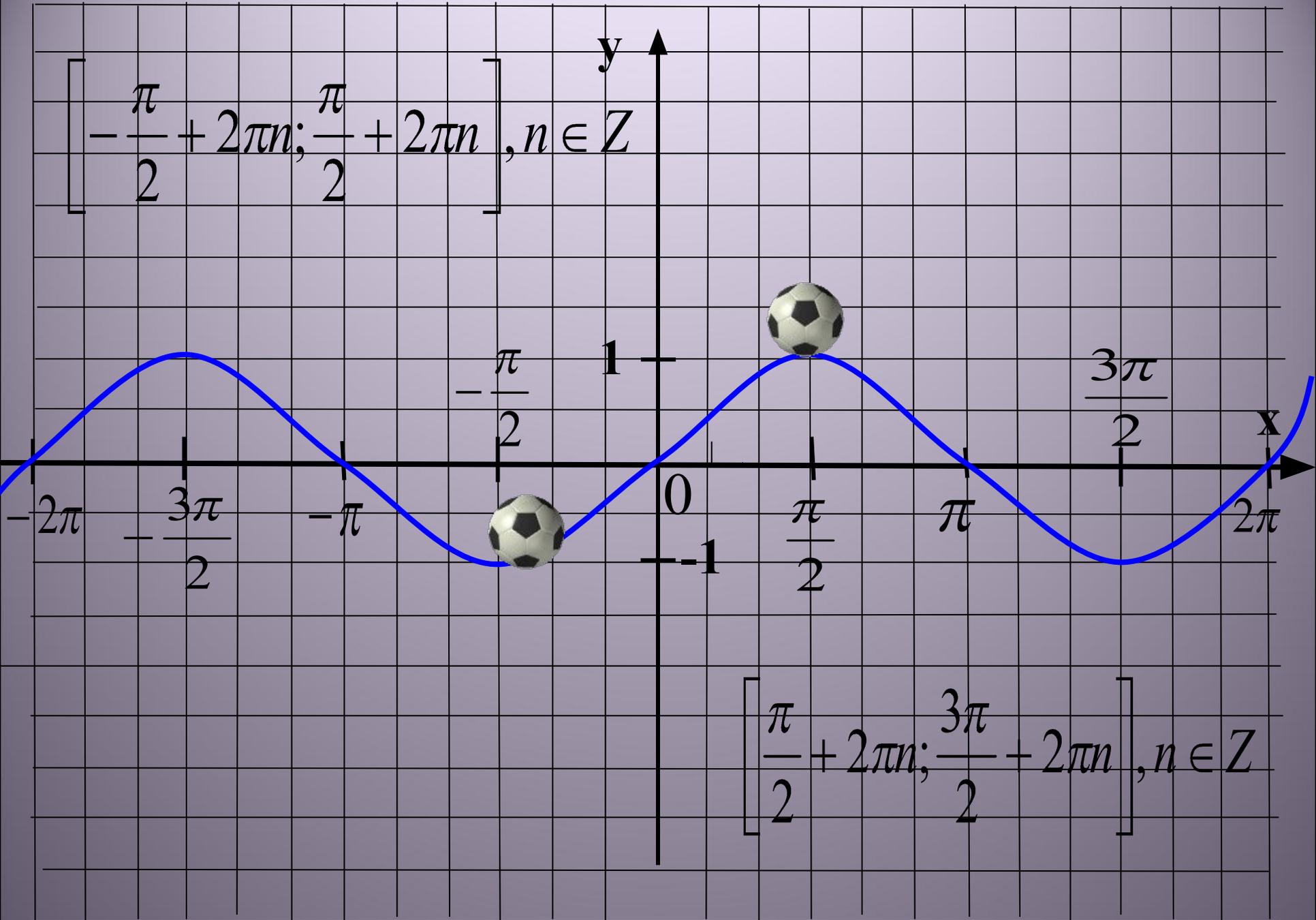


$$E(y) = [-1; 1]$$

$$y = 0$$



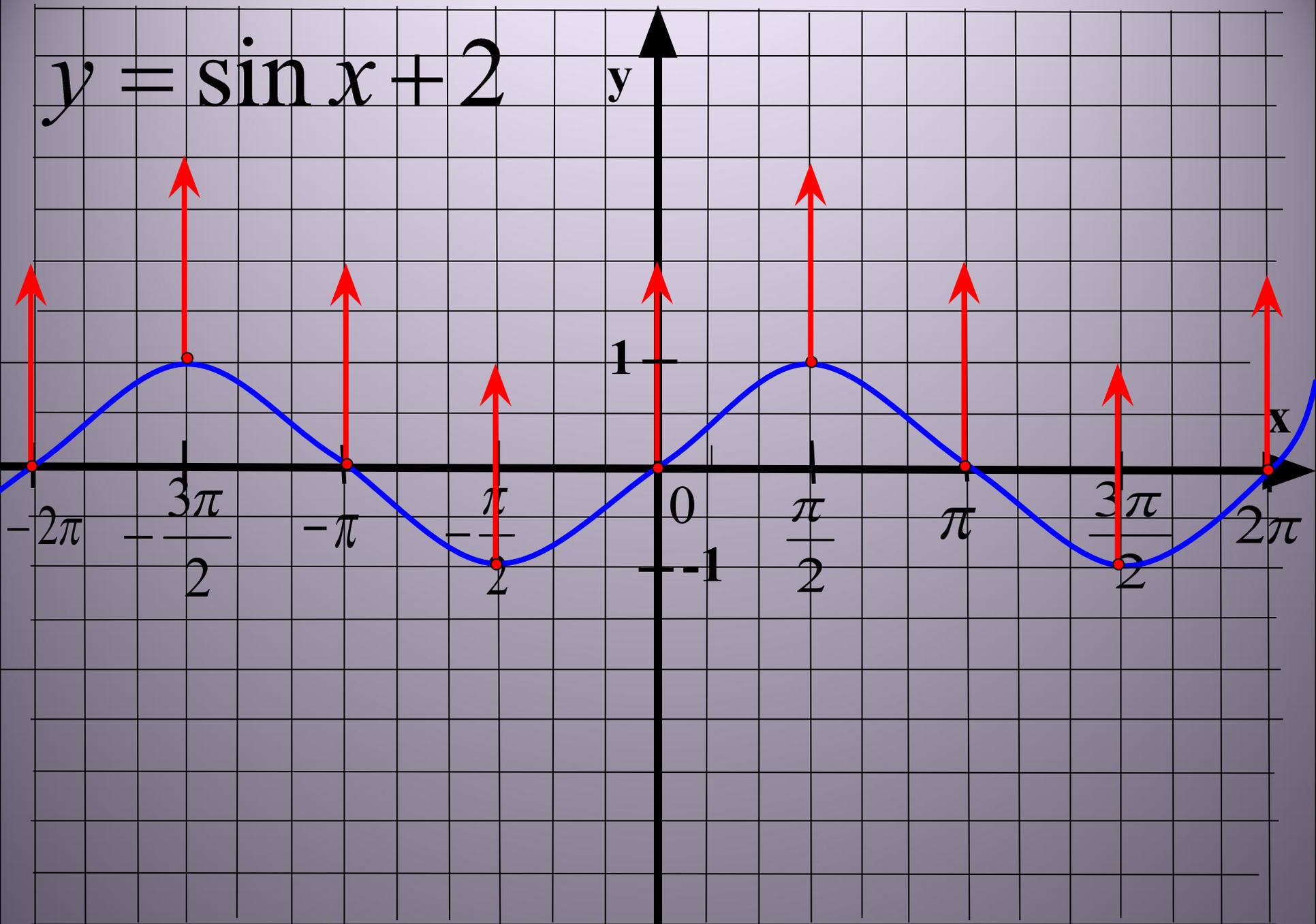
$$x = \pi n, n \in \mathbb{Z}$$



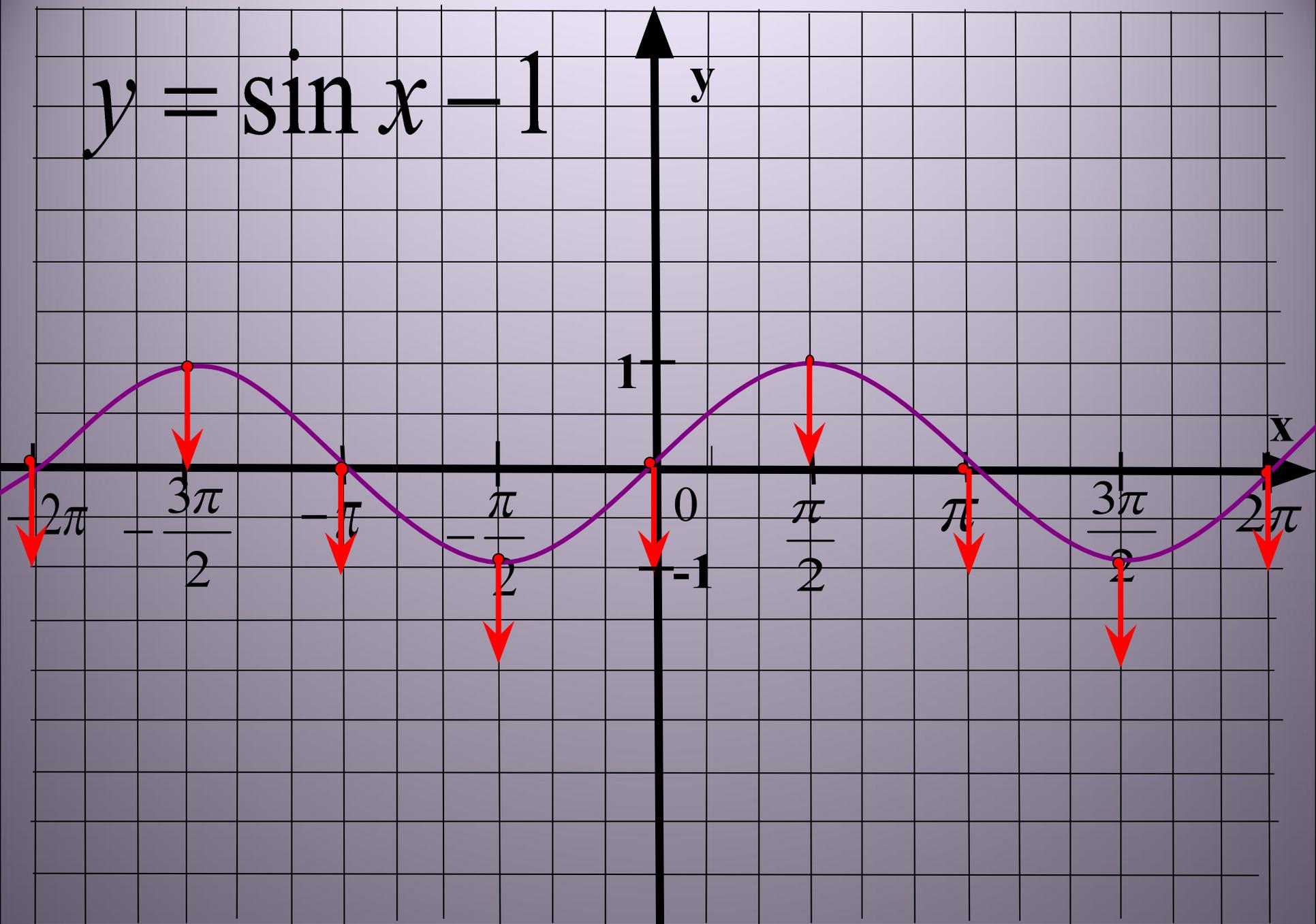
$$\left[-\frac{\pi}{2} + 2\pi n; \frac{\pi}{2} + 2\pi n \right], n \in \mathbb{Z}$$

$$\left[\frac{\pi}{2} + 2\pi n; \frac{3\pi}{2} + 2\pi n \right], n \in \mathbb{Z}$$

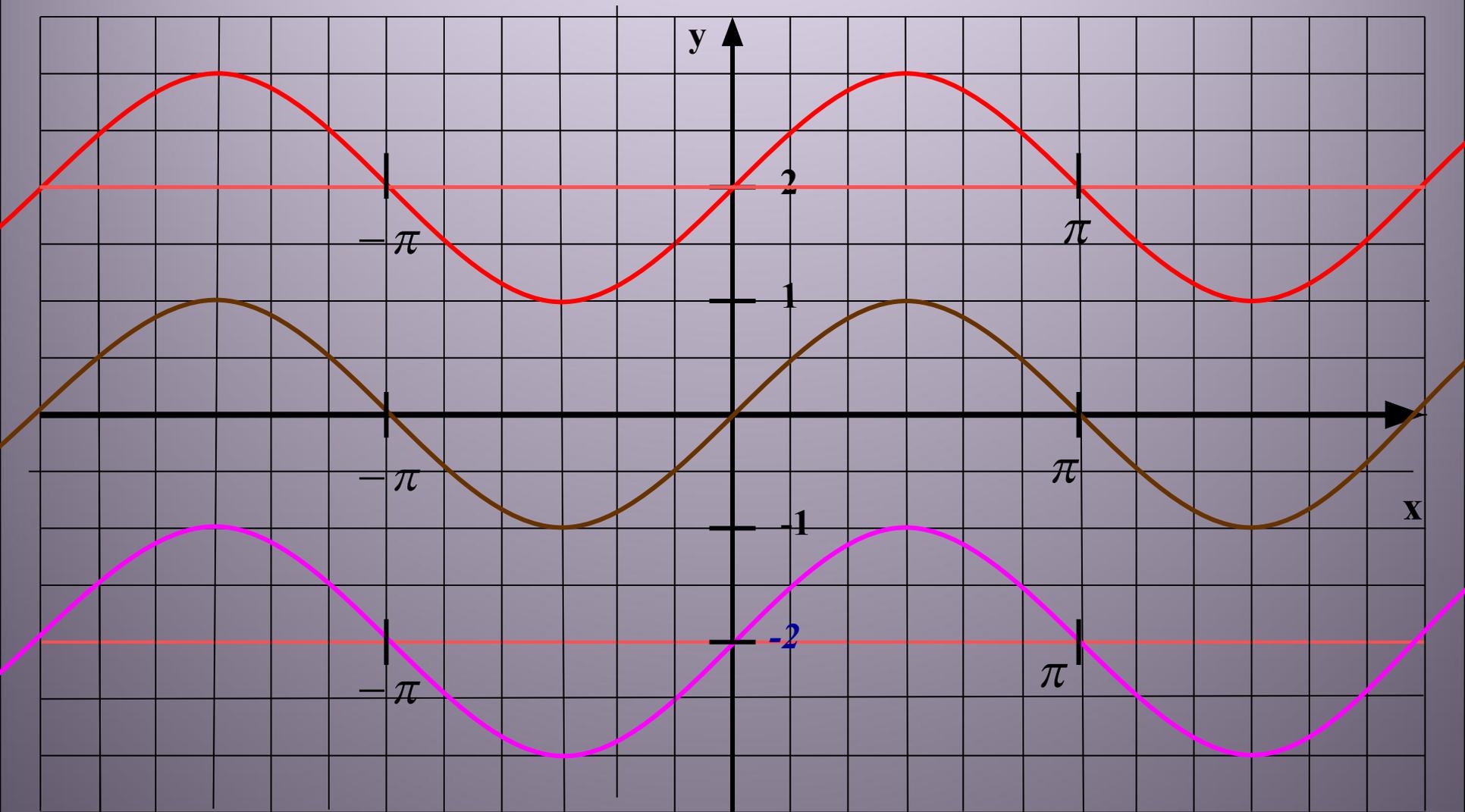
$$y = \sin x + 2$$



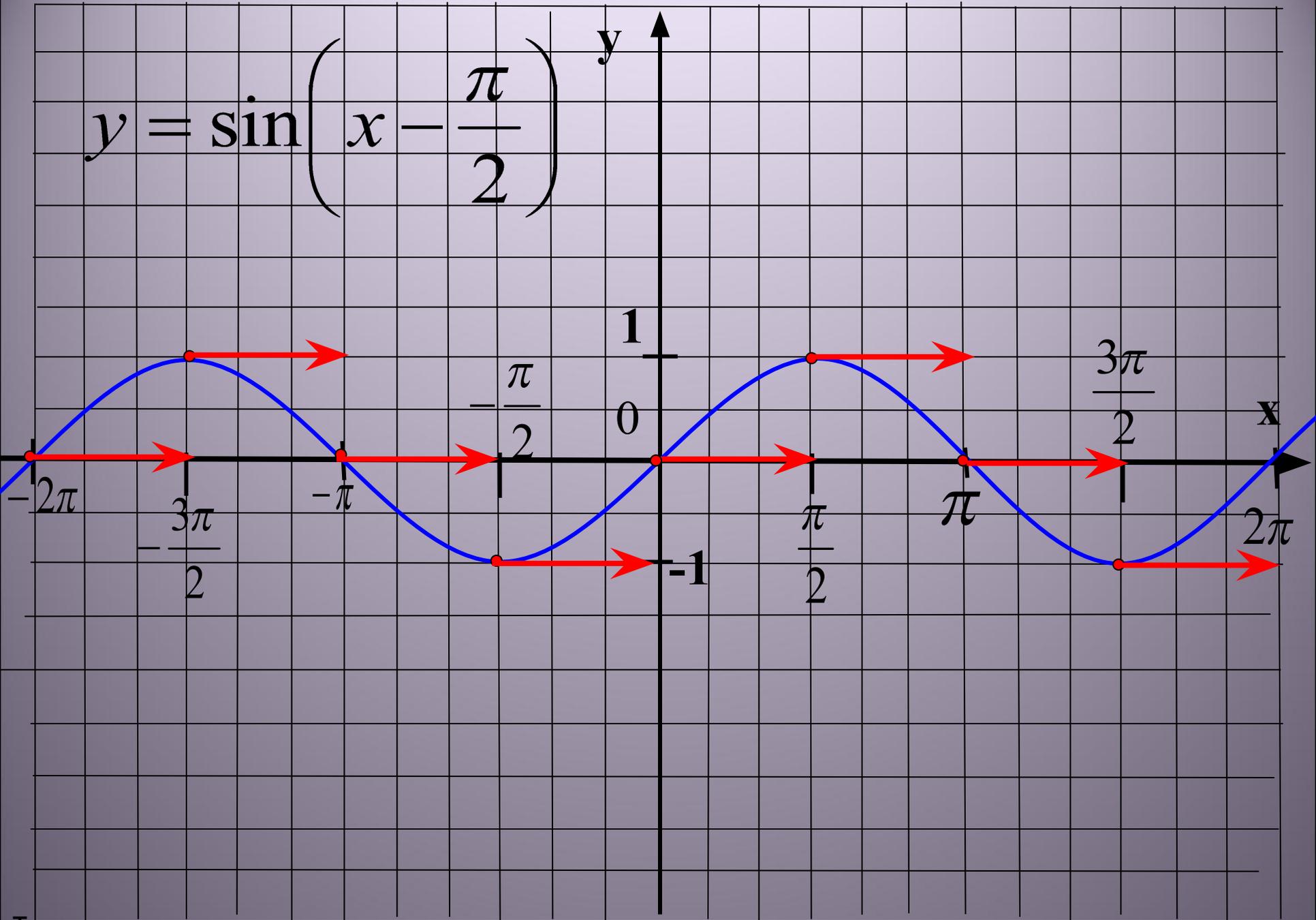
$$y = \sin x - 1$$



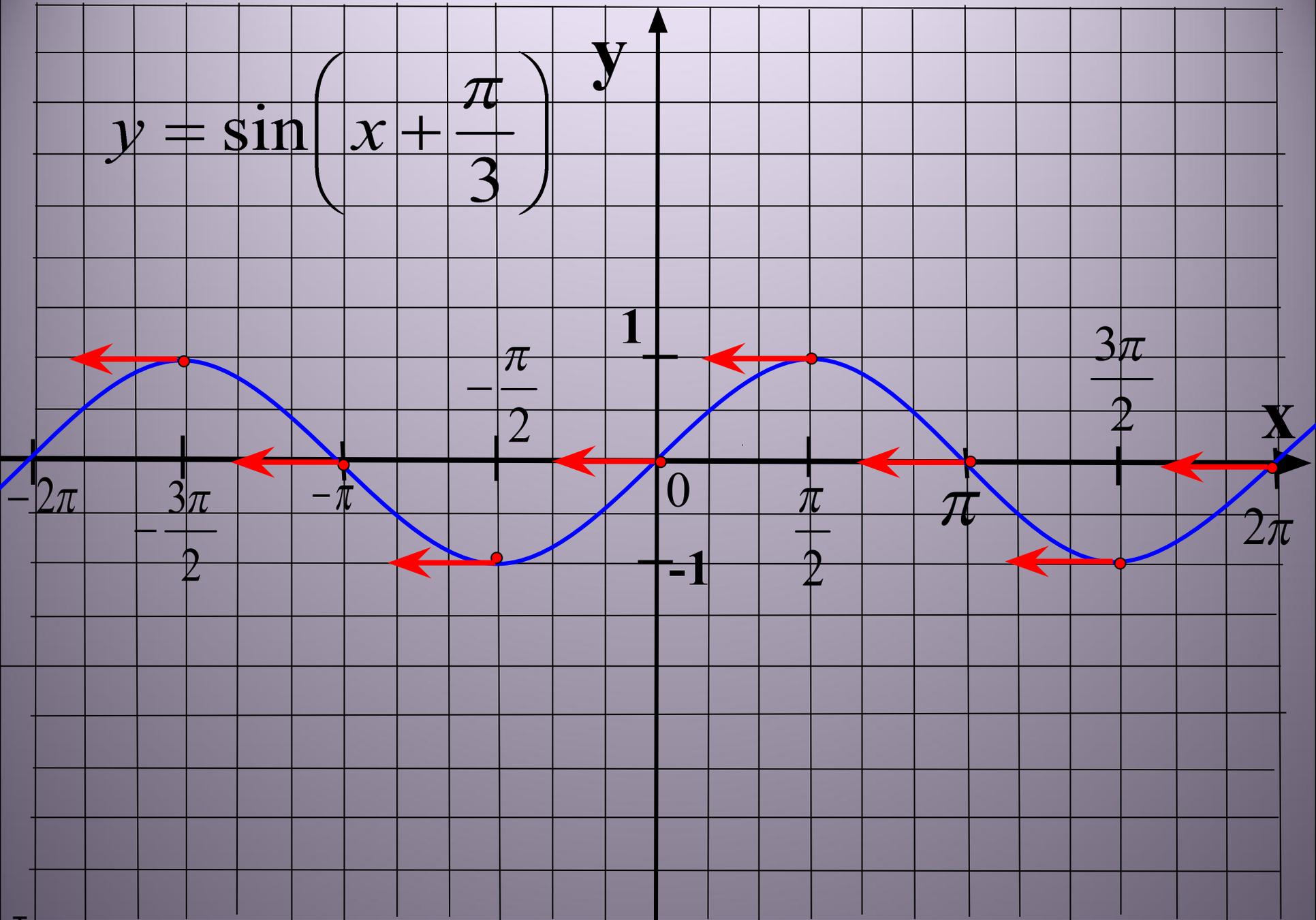
Проверка: $y_1 = \sin x$; $y_2 = \sin x + 2$; $y_3 = \sin x - 2$.



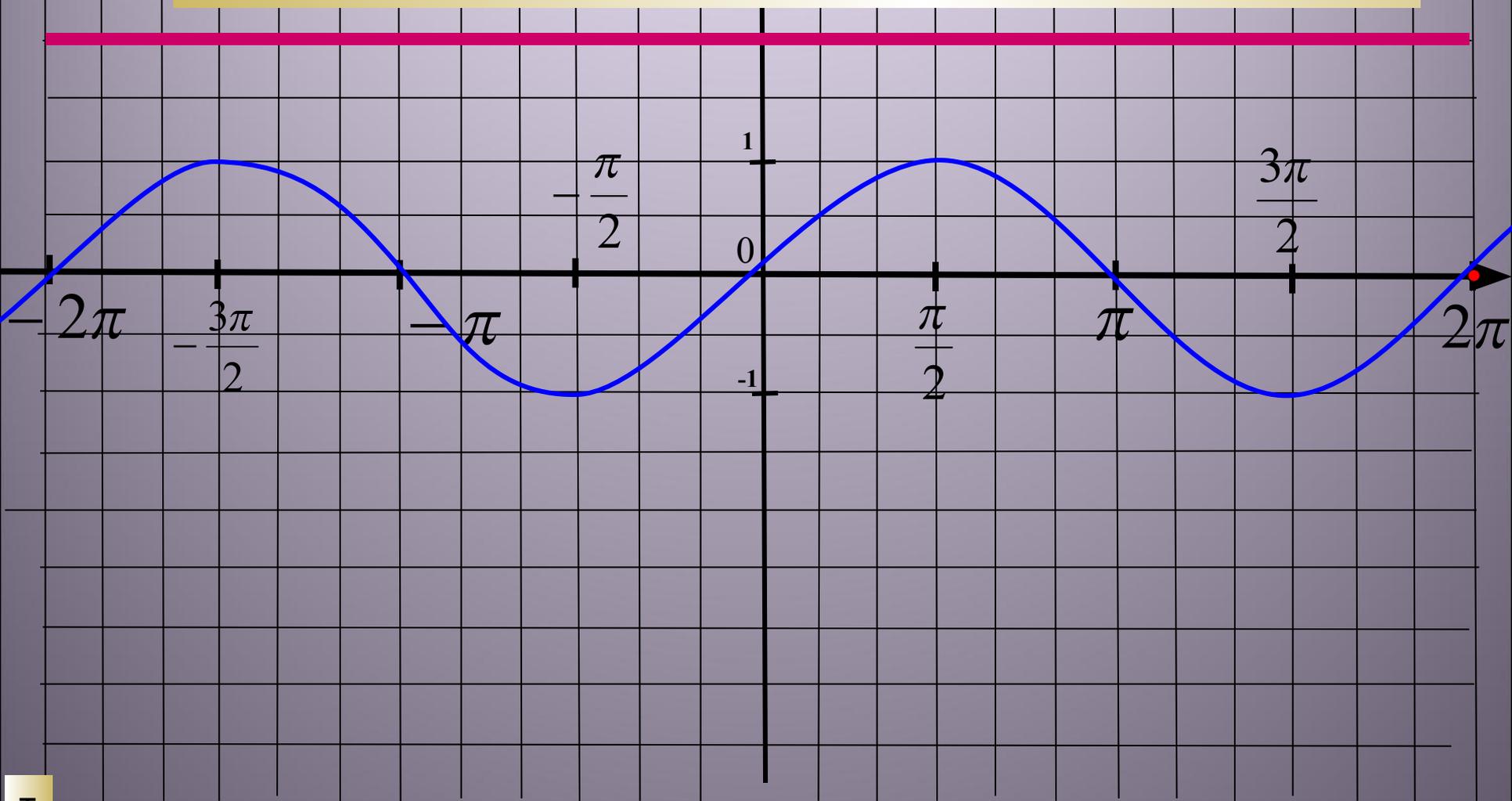
$$y = \sin\left(x - \frac{\pi}{2}\right)$$



$$y = \sin\left(x + \frac{\pi}{3}\right)$$



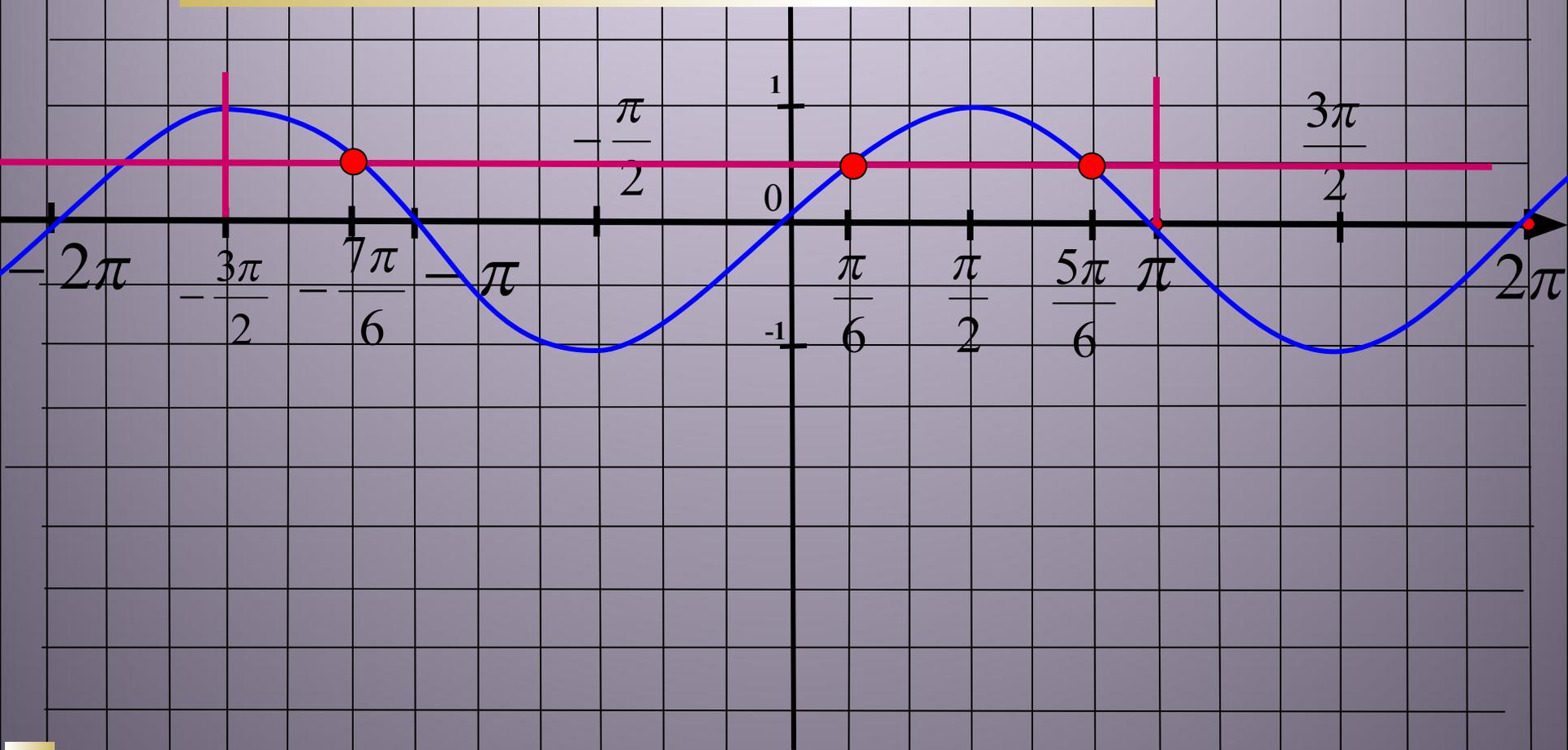
С помощью графика функции $y = \sin x$ выясните:
сколько решений имеет уравнение $\sin x = 2$



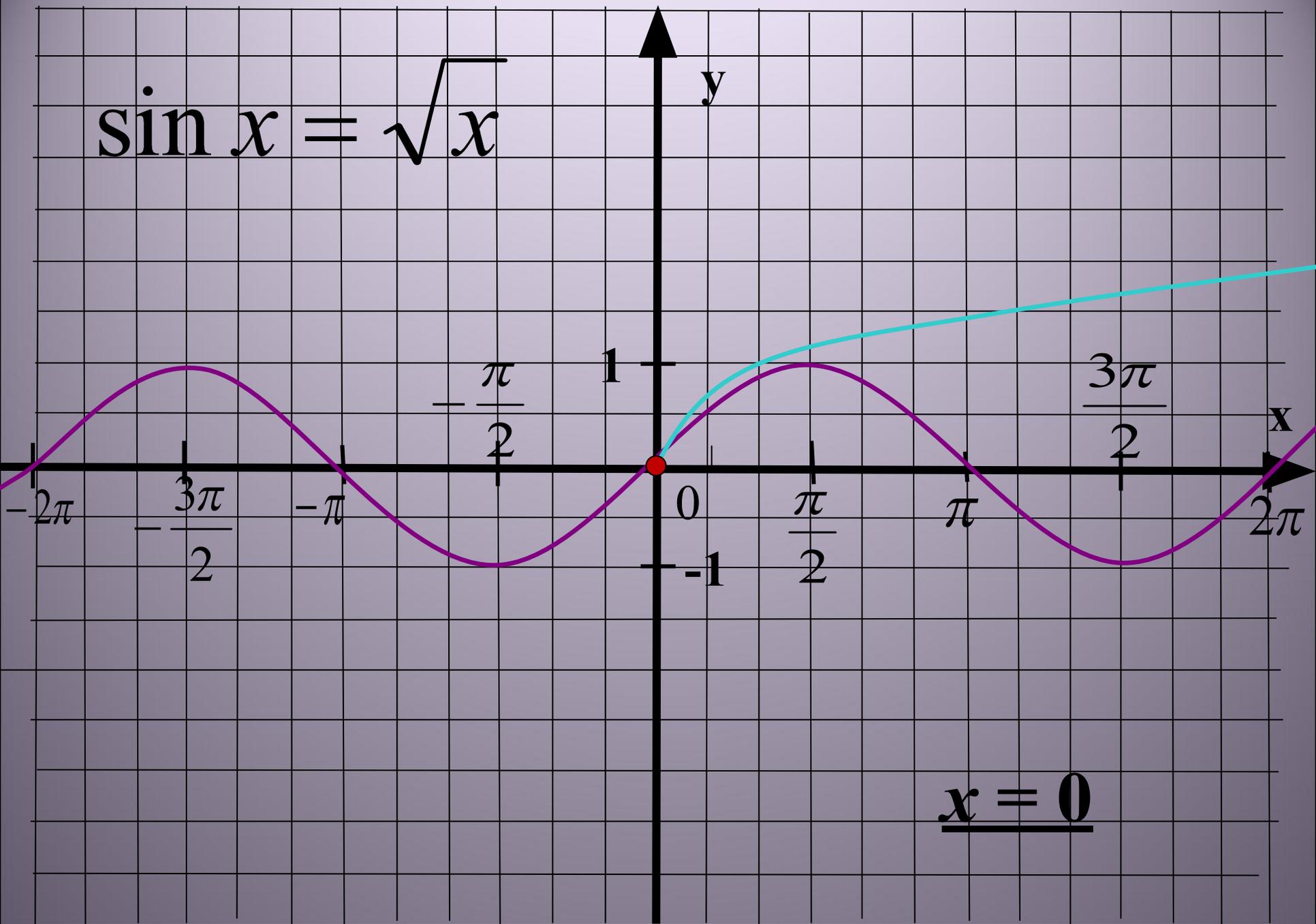
С помощью графика функции $y = \sin x$ выясните:

сколько решений имеет уравнение $\sin x = \frac{1}{2}$

на отрезке $\left[-\frac{3\pi}{2}; \pi\right]$



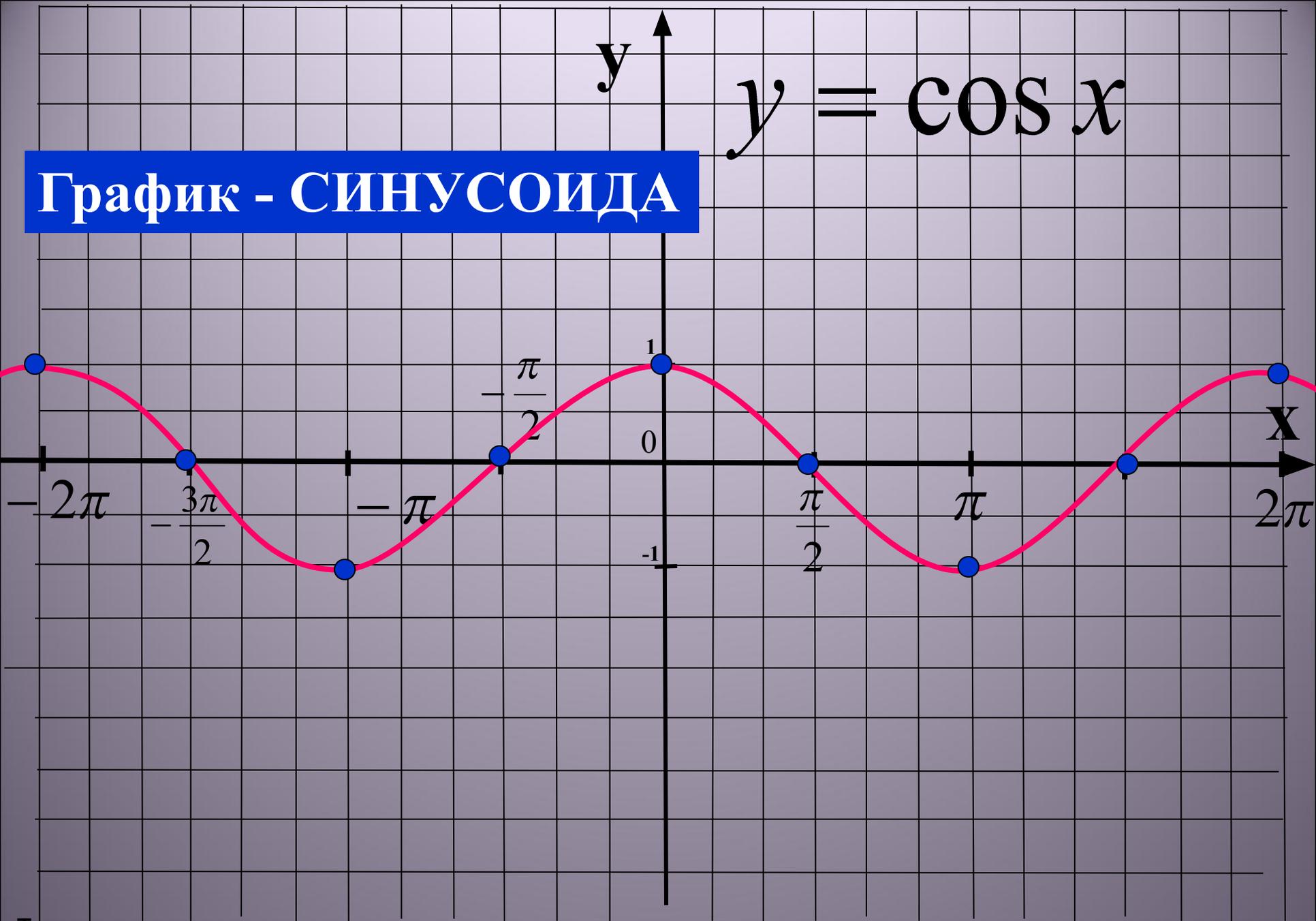
$$\sin x = \sqrt{x}$$



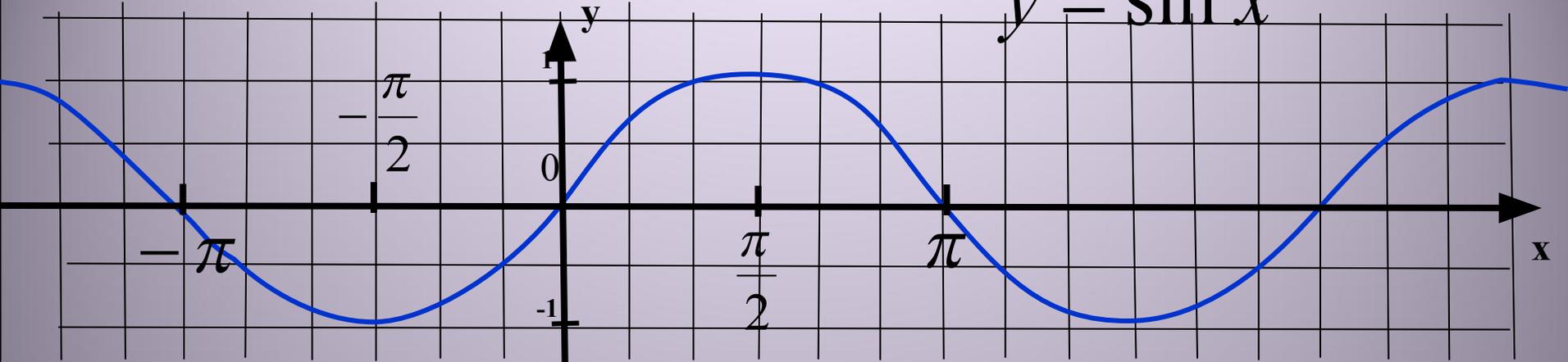
$$\underline{x = 0}$$

$$y = \cos x$$

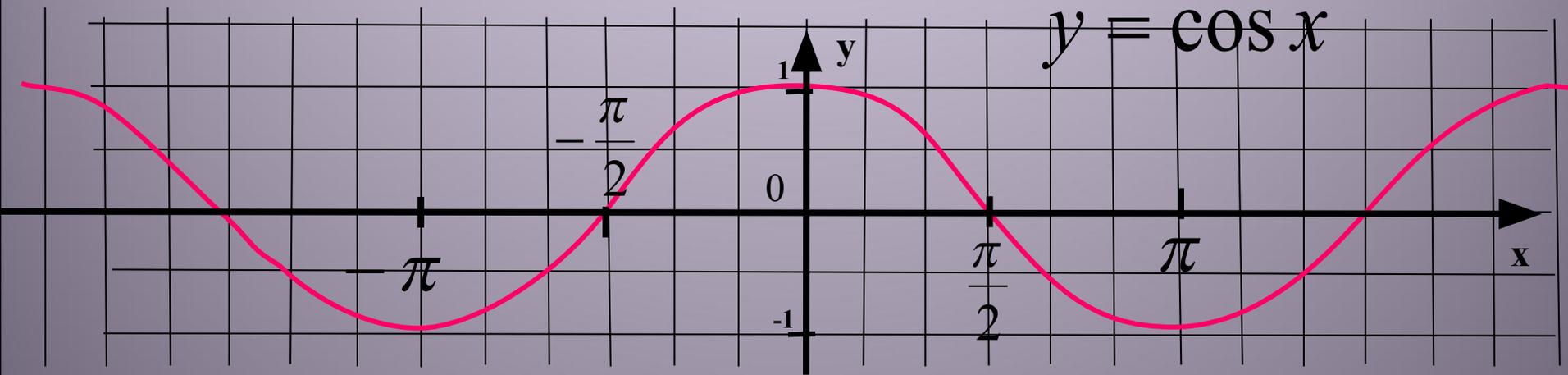
График - СИНУСОИДА



$$y = \sin x$$



$$y = \cos x$$



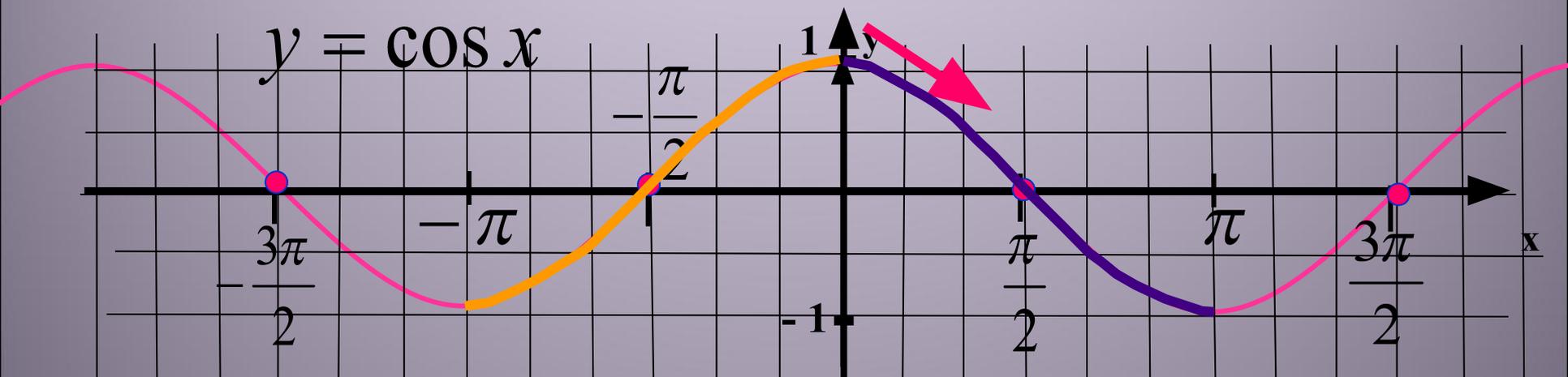
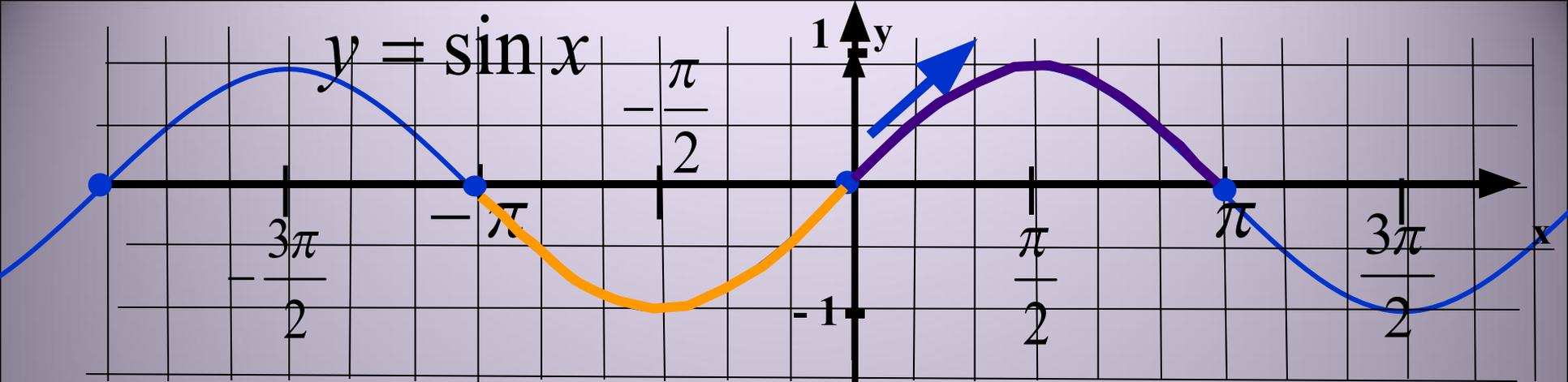


График функции $y = \sin x$ симметричен относительно нуля

График функции $y = \cos x$ симметричен относительно Oy

