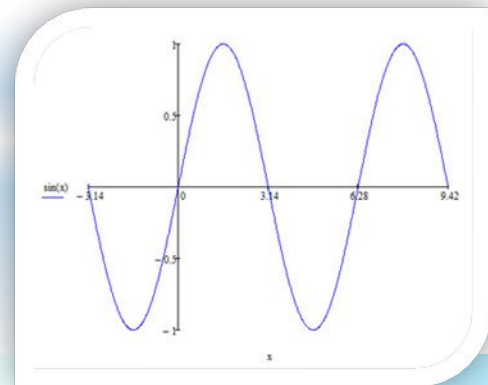


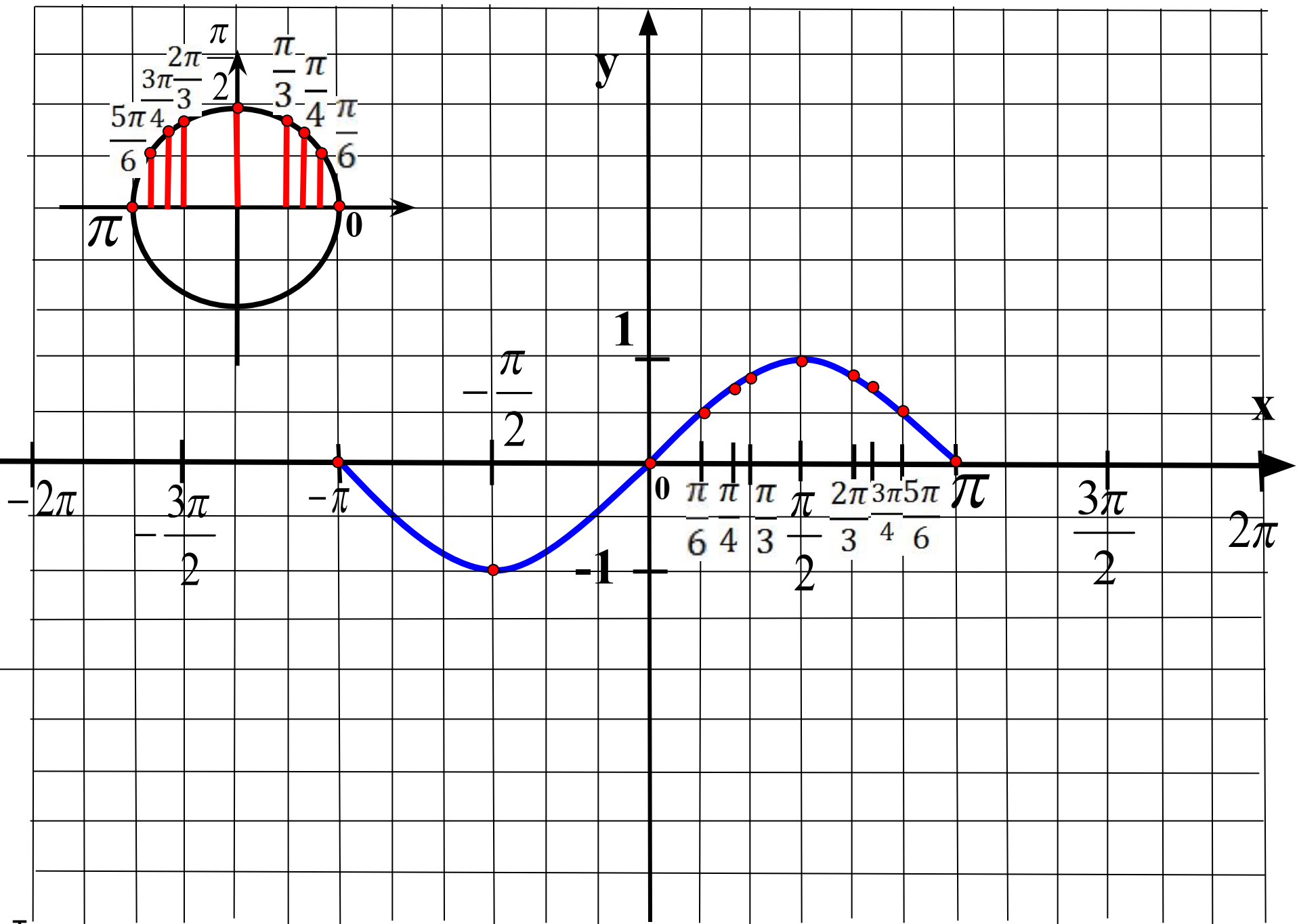
**«Много из математики не остается в памяти, но когда поймешь ее, тогда легко при случае вспомнить забытое.»**



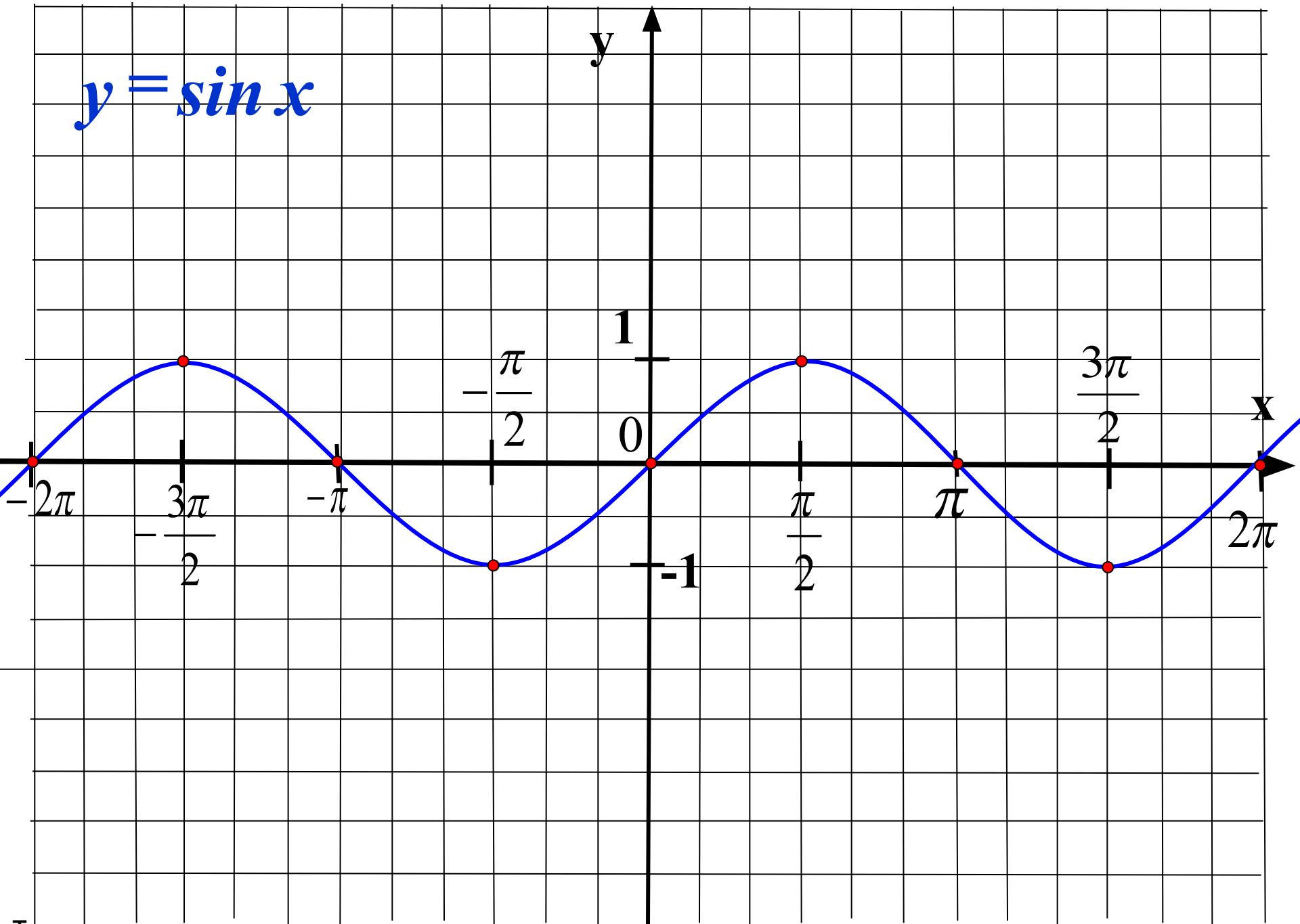
**Михаил Васильевич Остроградский  
(1801-1862, российский математик, механик)**

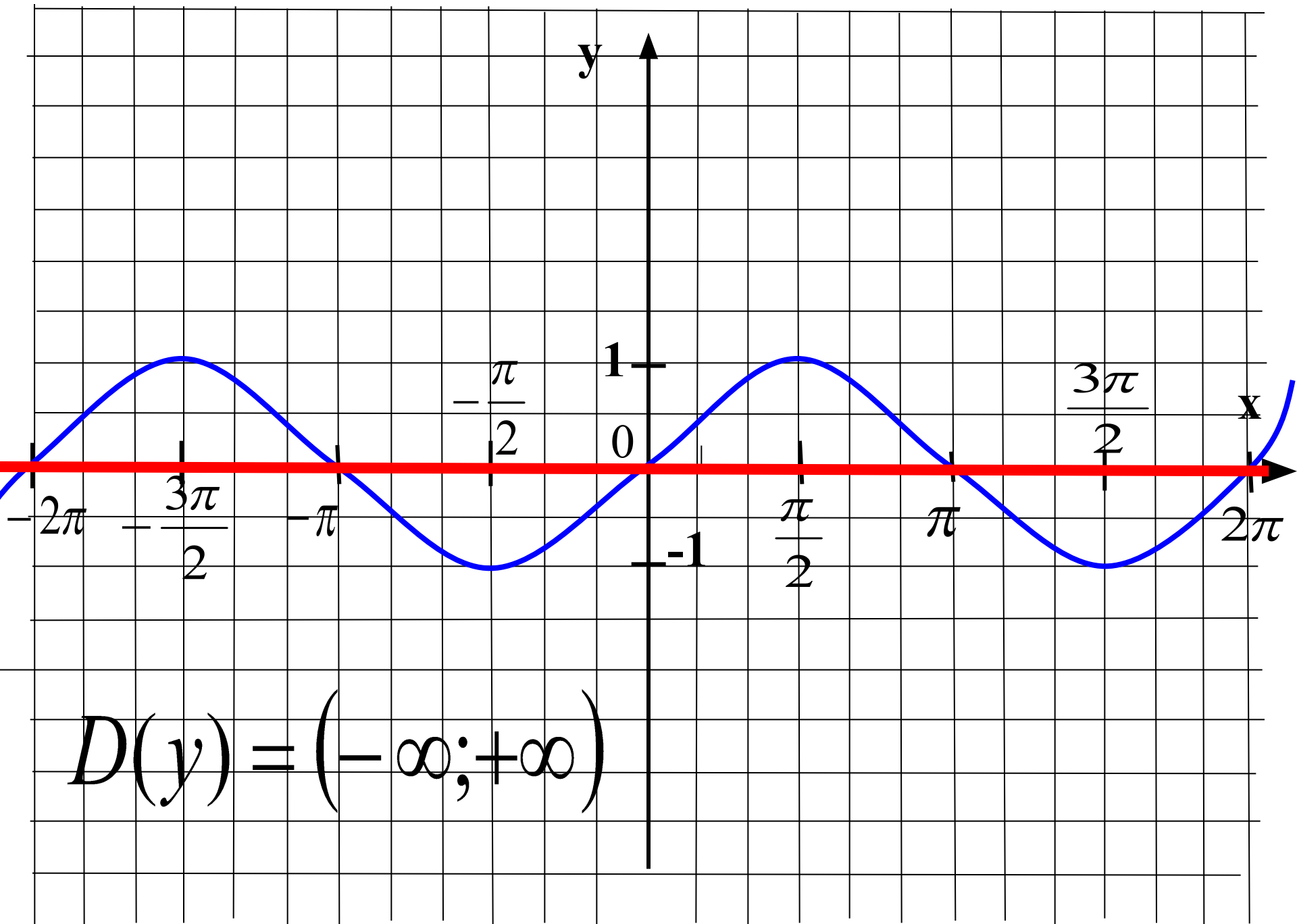
# Функция $y = \sin x$ , её свойства и график



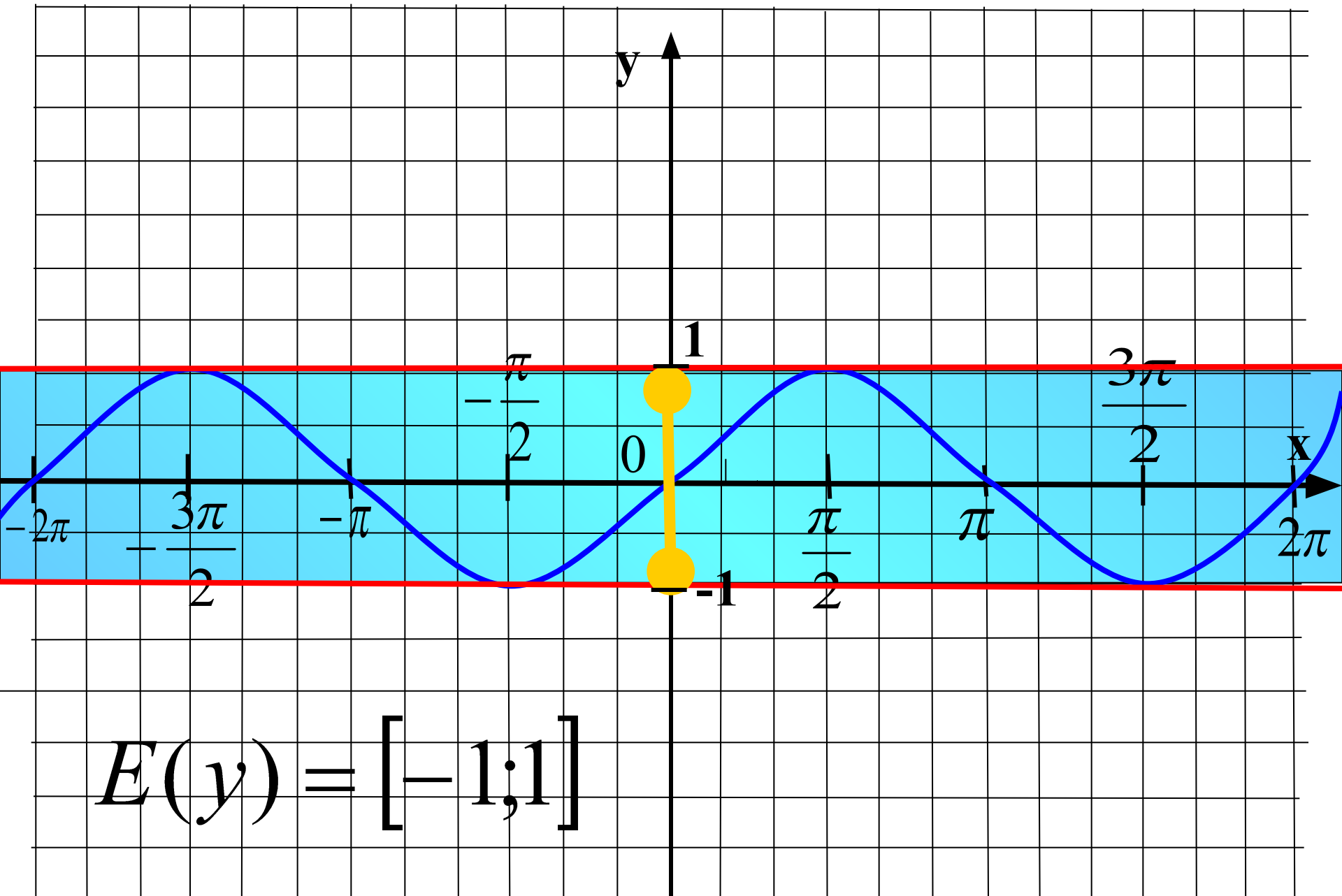


$$y = \sin x$$



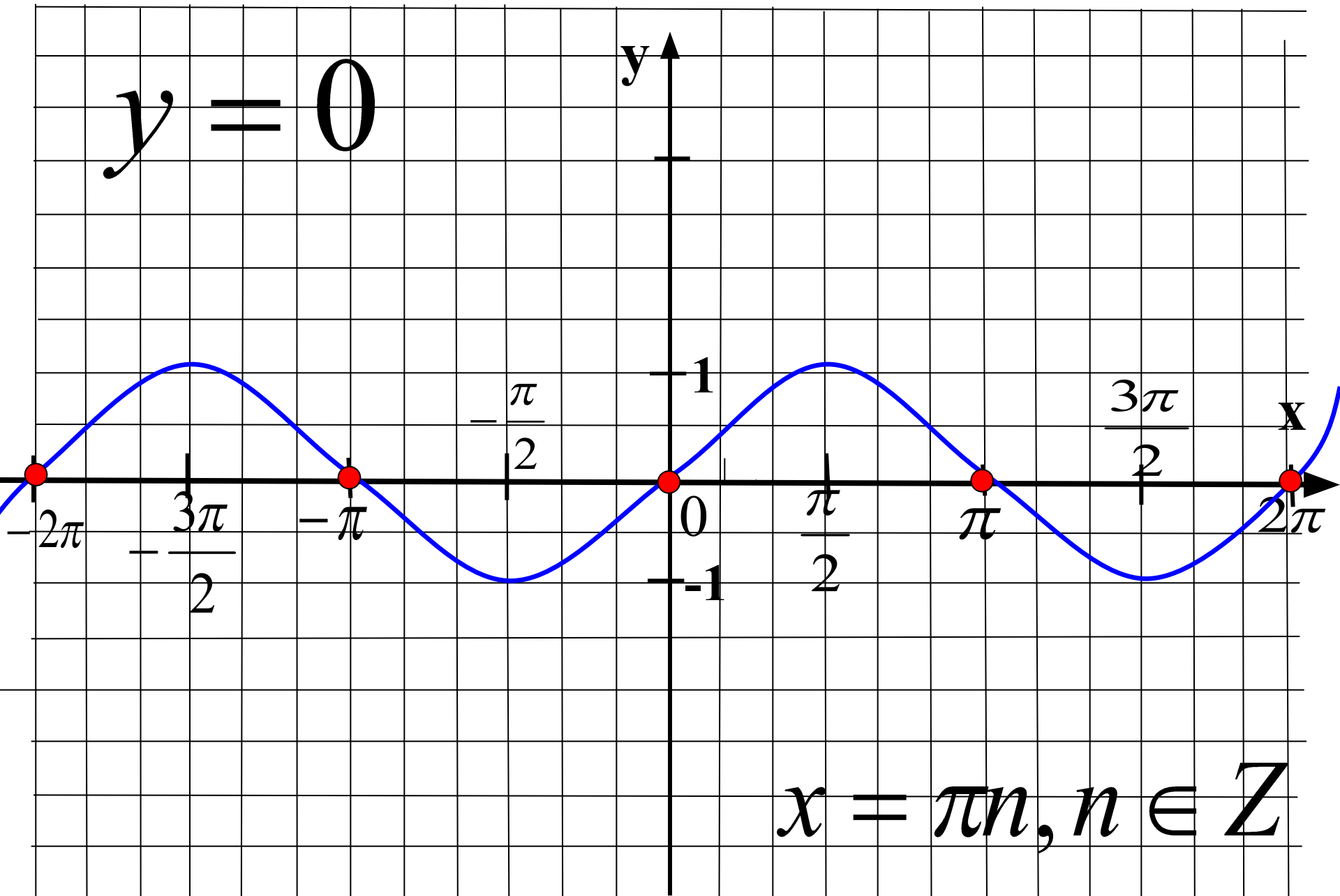


$$D(y) = (-\infty; +\infty)$$

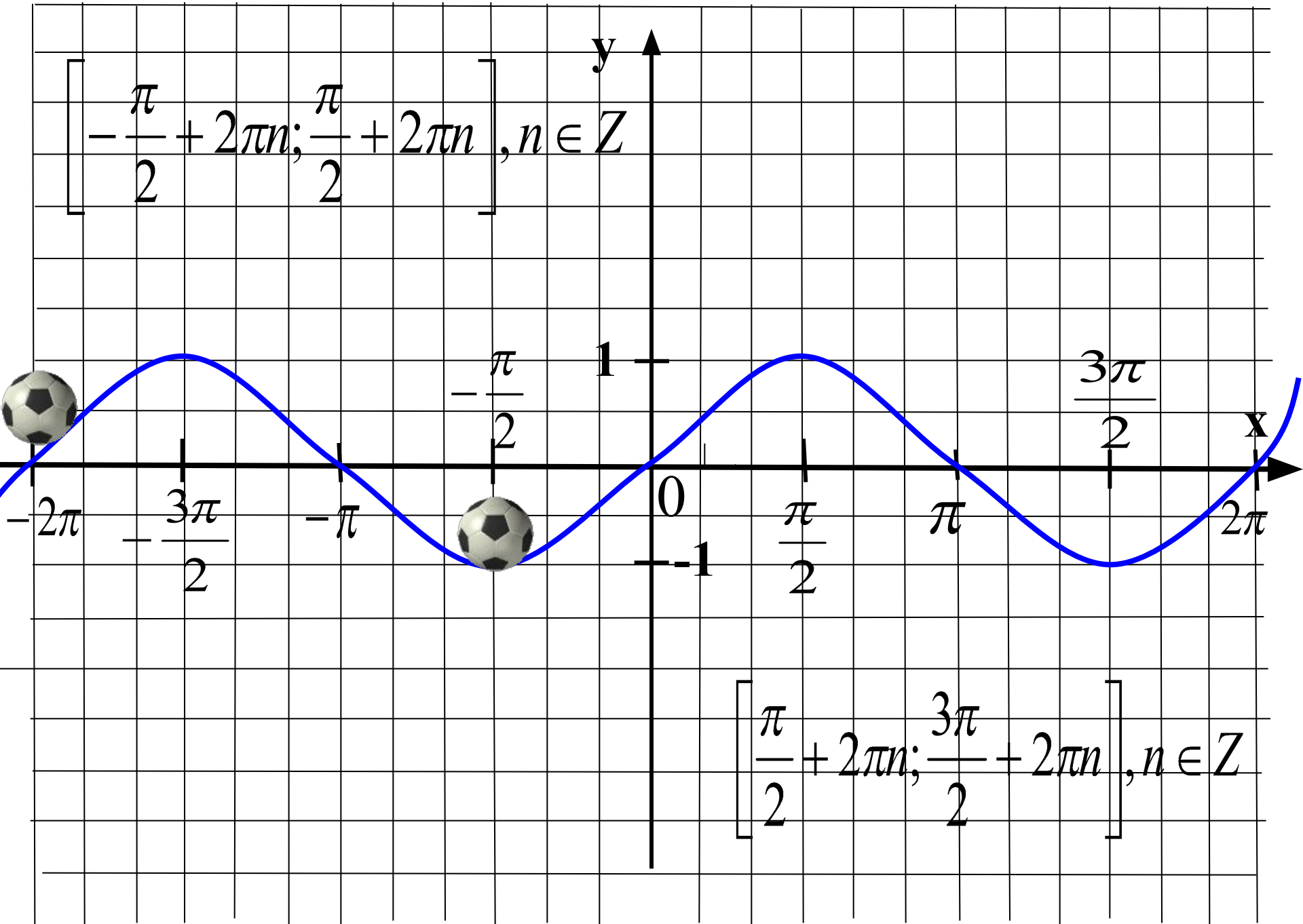


$$E(y) = [-1; 1]$$

$$y = 0$$



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

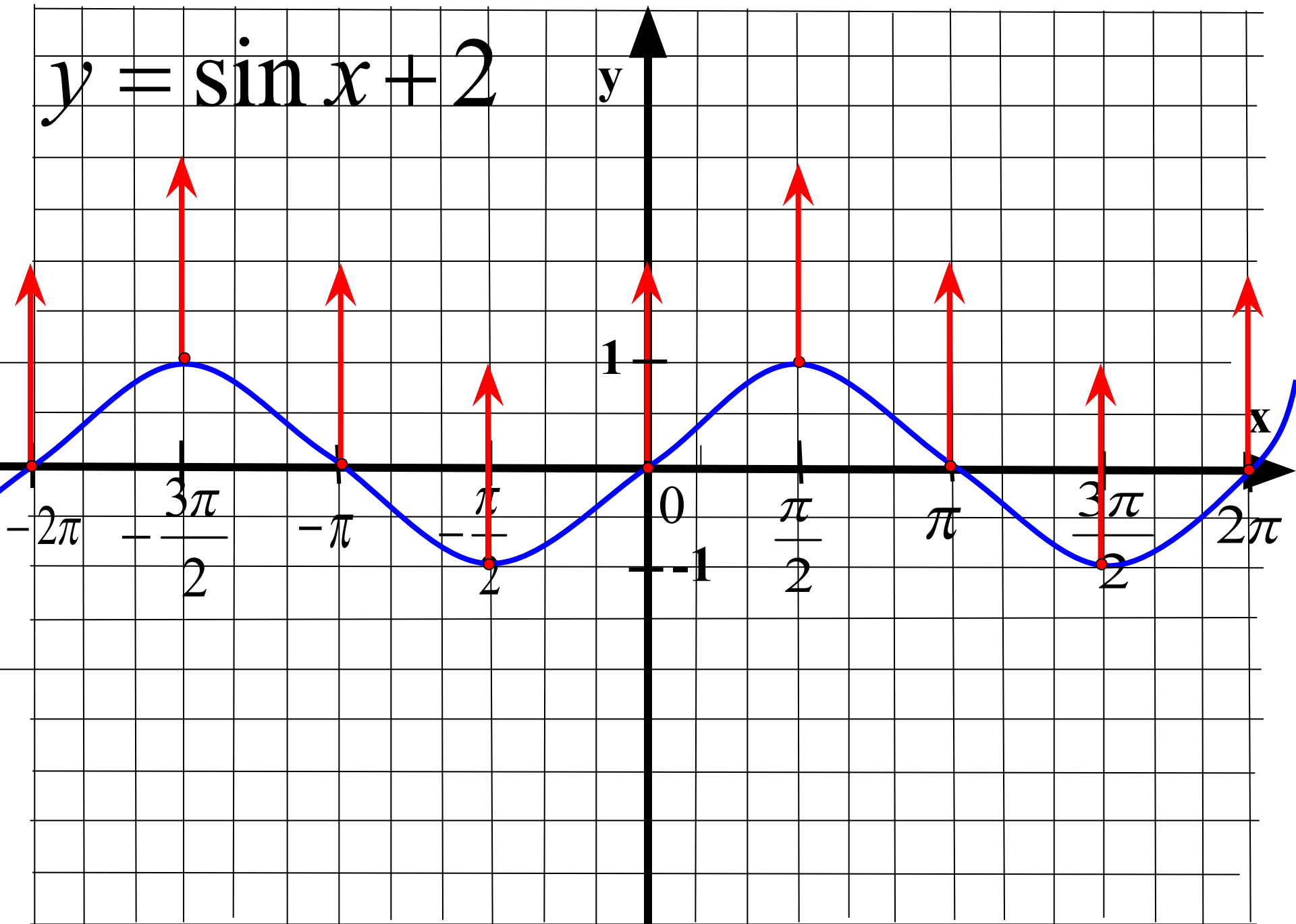


$$\left[-\frac{\pi}{2} + 2\pi n; \frac{\pi}{2} + 2\pi n\right], n \in \mathbb{Z}$$

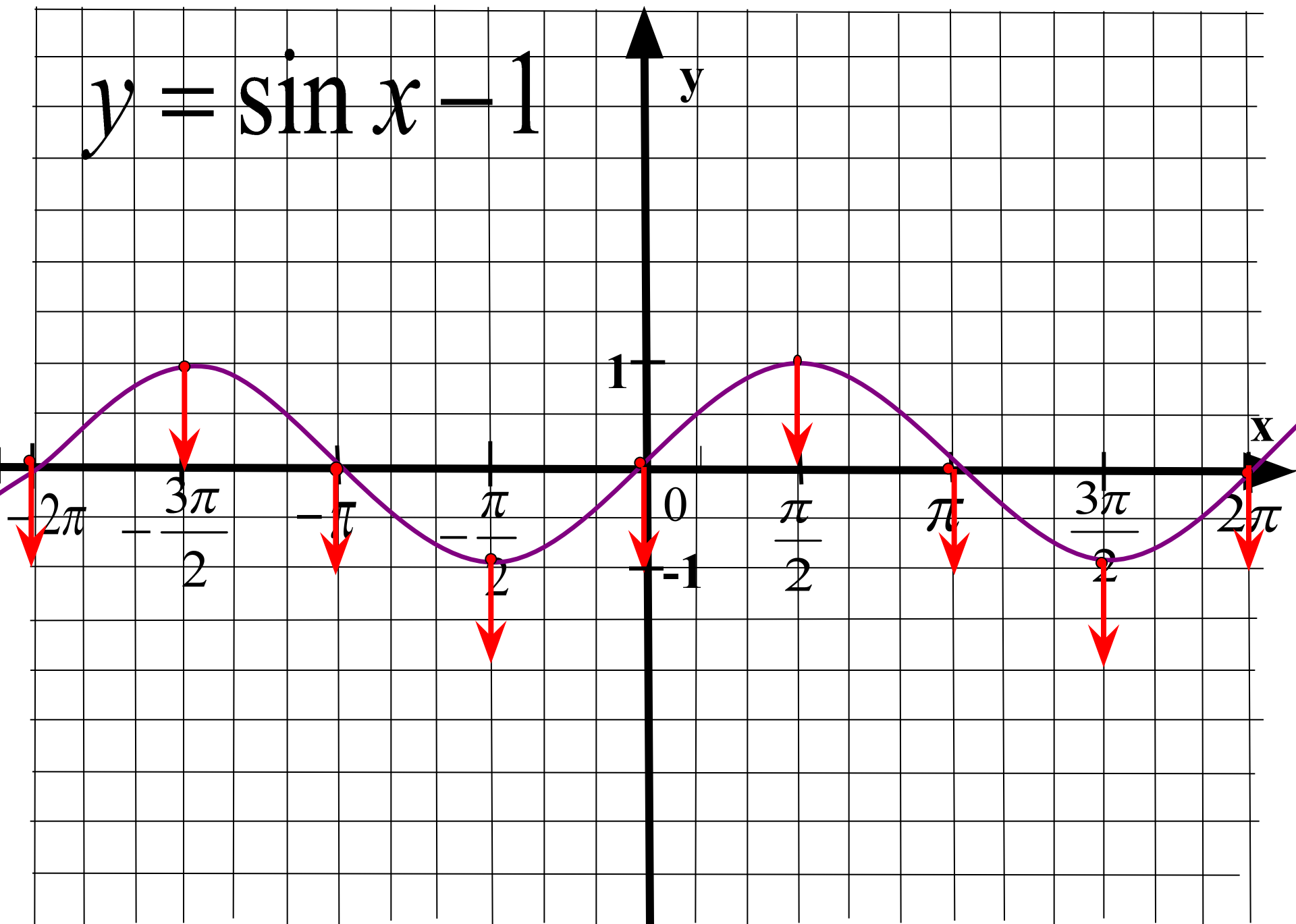
$$\left[\frac{\pi}{2} + 2\pi n; \frac{3\pi}{2} + 2\pi n\right], n \in \mathbb{Z}$$



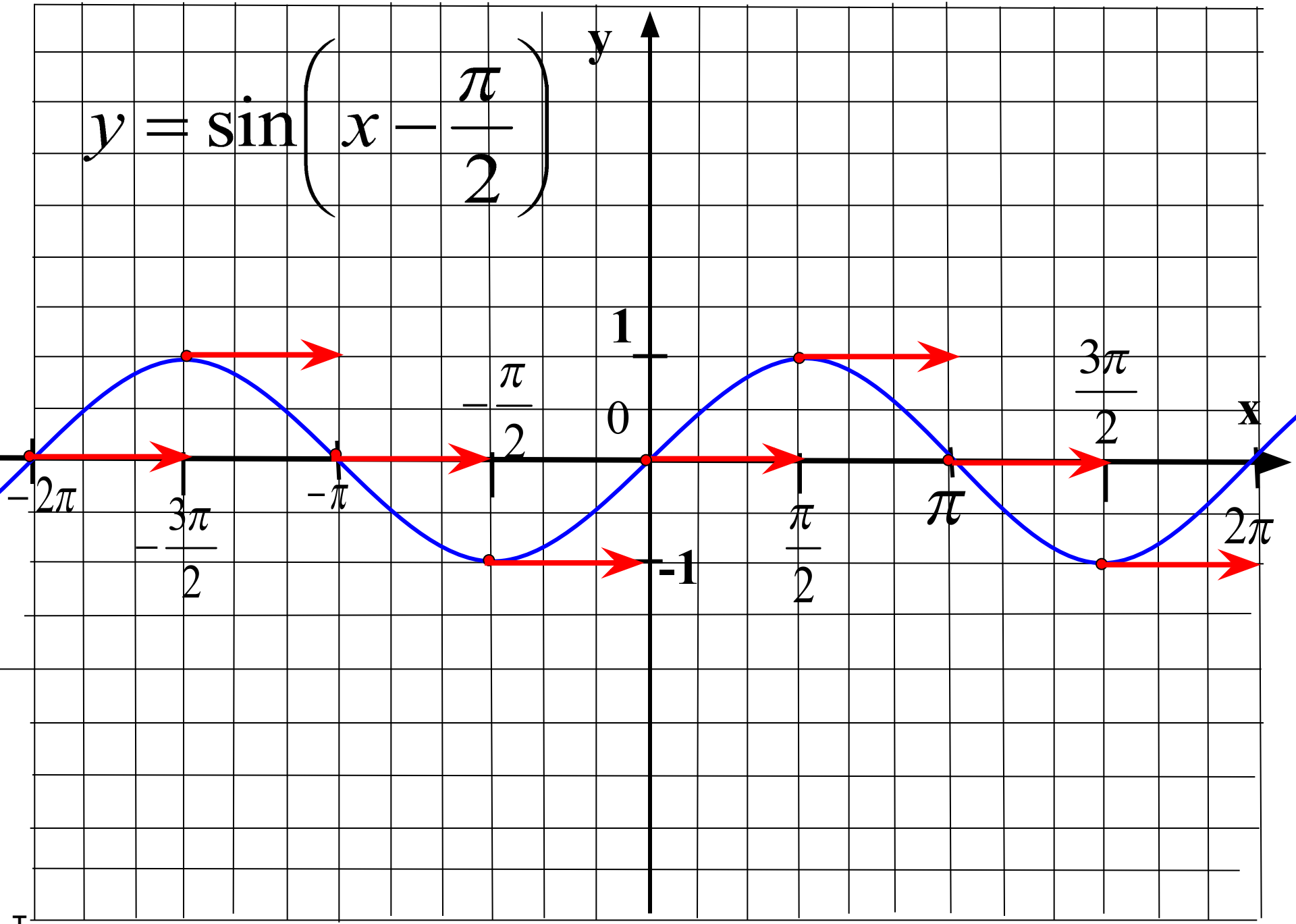
$$y = \sin x + 2$$



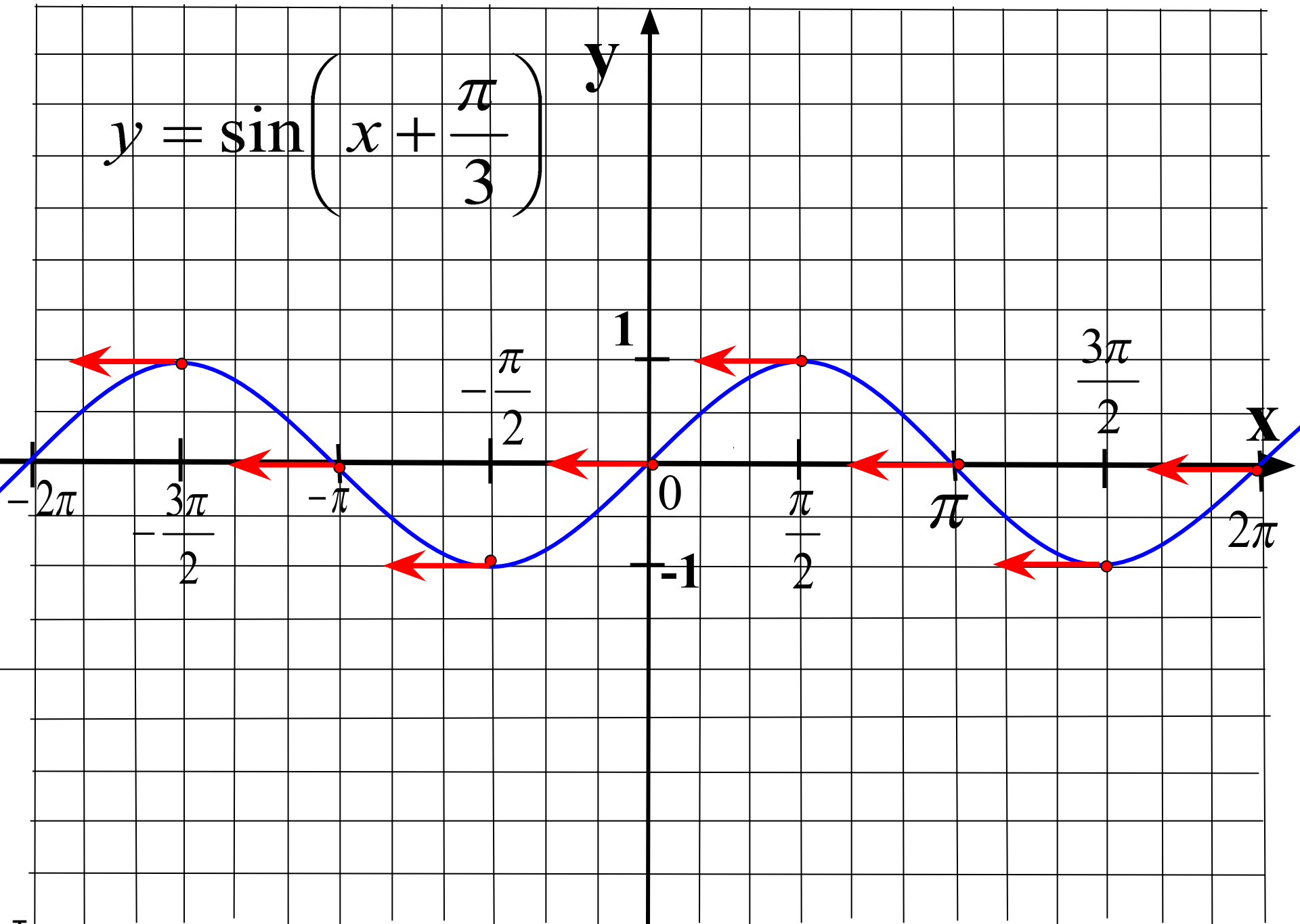
$$y = \sin x - 1$$



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



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



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

