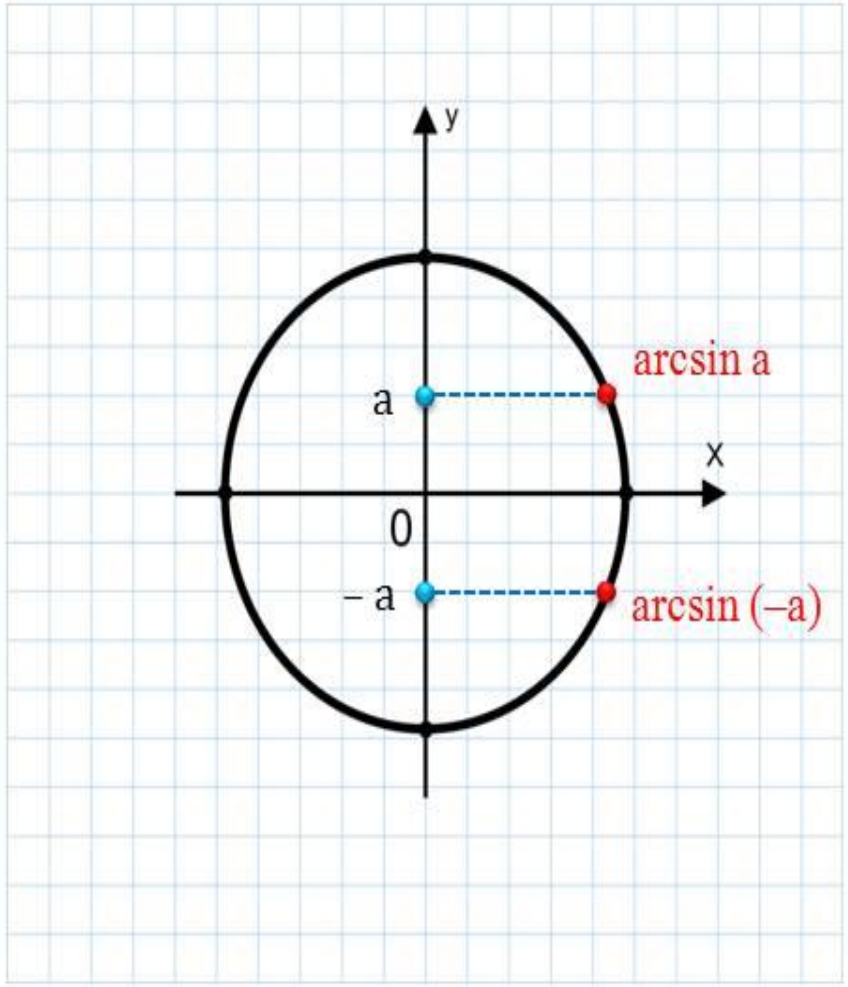
ШПАРГАЛКА

$\forall a \in [-1; 1]$;

$$\arcsin(-a) = -\arcsin a;$$



Вычислите:

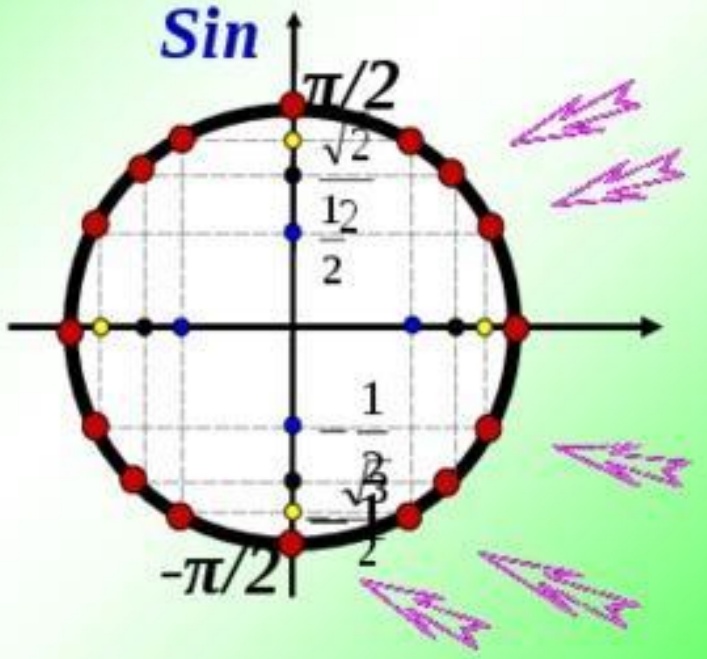
$$\arcsin\frac{1}{2}=\frac{\pi}{6}$$

$$\arcsin\frac{\sqrt{2}}{2}=\frac{\pi}{4}$$

$$\arcsin\left(-\frac{\sqrt{3}}{2}\right)=-\frac{\pi}{3}$$

$$\arcsin(-1)=-\frac{\pi}{2}$$

$$\arcsin\left(-\frac{1}{2}\right)=-\frac{\pi}{6}$$



Ищу число из отрезка [-π/2; π/2], синус которого равен …

АРКСИНУС ЧИСЛА
ОСНОВНЫЕ ФОРМУЛЫ

$$\sin(\arcsin a) = a, \arcsin a \in \left[-\frac{\pi}{2}; \frac{\pi}{2}\right], a \in [-1;1]$$

$$\arcsin(-a) = -\arcsin a$$

$$\arcsin(\sin \alpha) = \alpha, \alpha \in \left[-\frac{\pi}{2}; \frac{\pi}{2}\right]$$

АРКСИНУС ЧИСЛА
ОСНОВНЫЕ ФОРМУЛЫ

$$\arcsin(\sin\alpha)=\alpha,\ \alpha\in\left[-\frac{\pi}{2};\frac{\pi}{2}\right]$$

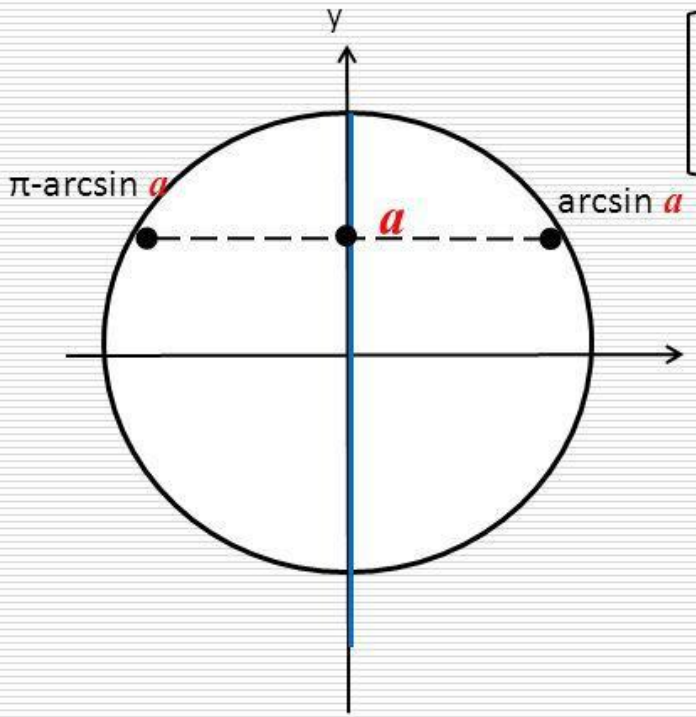
- **Например**

9. $$\arcsin\left(\sin\frac{\pi}{5}\right)=\frac{\pi}{5}$$

10. $$\arcsin\left(\sin\frac{3}{5}\pi\right)=\arcsin\left(\sin\left(\pi-\frac{2}{5}\pi\right)\right)=$$

$$\arcsin\left(\sin\frac{2}{5}\pi\right)=\frac{2}{5}\pi$$

sin t = *a*, *где* | *a* |≤ 1



$$\begin{cases} t = arcsin\boldsymbol{a} + 2\pi k, k \in Z \\ t = \pi - arcsin\boldsymbol{a} + 2\pi k, k \in Z \end{cases}$$

$$t = (-1)^k arcsin\boldsymbol{a} + \pi k, k \in Z$$

$$\sin x = -a$$

$$\arcsin(-a) = -\arcsin a$$

$$\begin{cases} x = -\arcsin a + \pi k,\ n \in Z \\ x = -(\pi - \arcsin a) + \pi k,\ n \in Z \end{cases}$$

$$x = (-1)^k \cdot \arcsin(-a) + \pi k,\ n \in Z$$

$$x = (-1)^{k+1} \cdot \arcsin a + \pi k,\ n \in Z$$

sin x = - a

arcsin(- *a*) = - arcsin *a*

$$x = (-1)^{k+1} \cdot \arcsin a + \pi k,\ n \in Z$$

$$x = -\arcsin a + \pi k,\ n \in Z$$

$$x = -(\pi - \arcsin a) + \pi k,\ n \in Z$$

Пример:

$$\sin x = -\frac{1}{2}$$

Решение:

$$x = (-1)^{\kappa+1}\frac{\pi}{6} + \pi\kappa,\ \kappa \in Z$$

$$x = -\frac{\pi}{6} + 2\pi k,\ \ k \in Z$$

$$x = -\frac{5\pi}{6} + 2\pi k,\ \ k \in Z$$