

*Определение
арктангенса и
арккотангенса
числа a*

Таблица некоторых значений тригонометрических функций

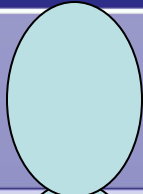
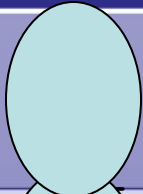
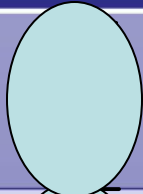
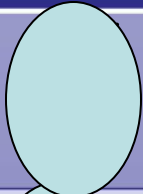
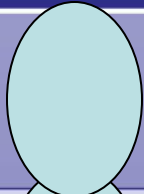
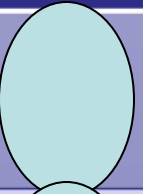
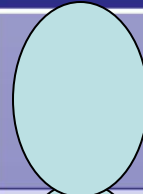
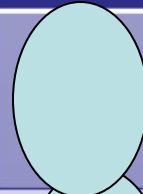
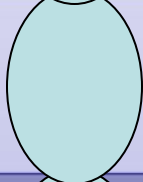
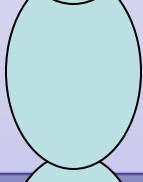
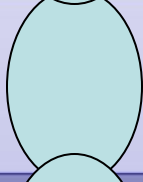
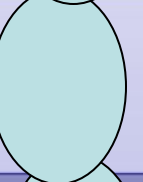
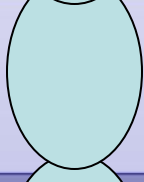
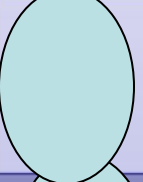
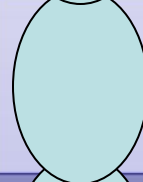
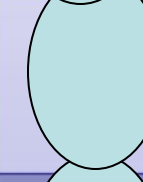
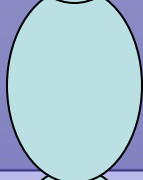
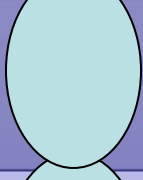
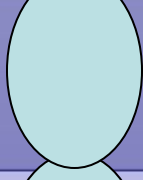
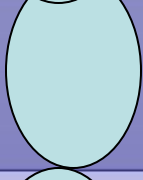
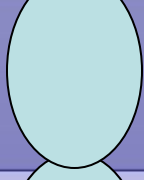
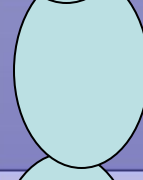
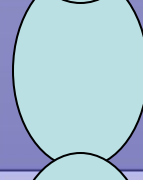
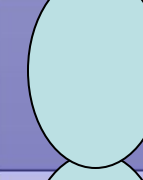
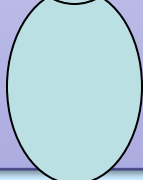
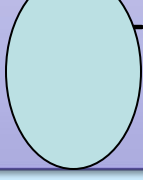
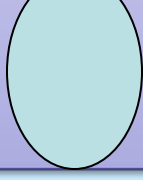
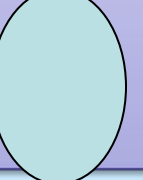
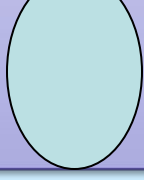
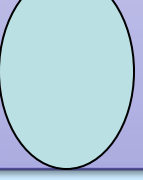
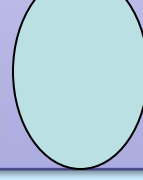
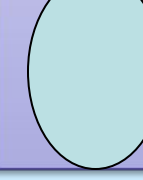
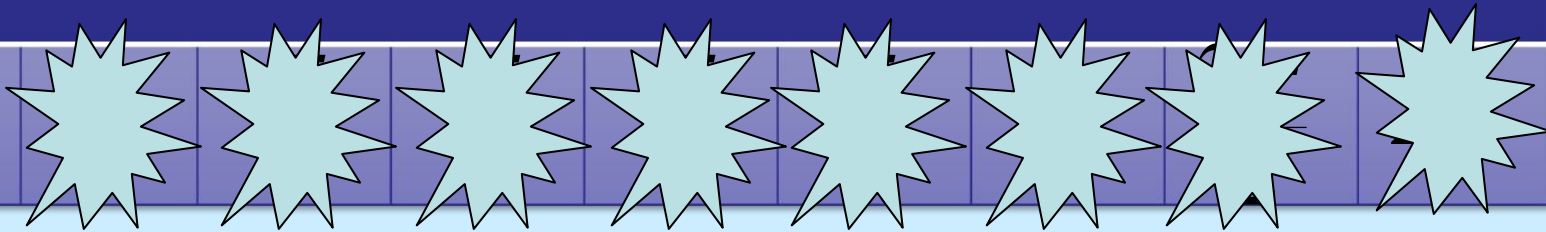
функция	0	30	45	60	90	180	270	360
\sin								
\cos								
tg								
ctg								

Таблица перевода градусов в радианы

градусы	0	30	45	60	90	180	270	360
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радианы								
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Вычислить:

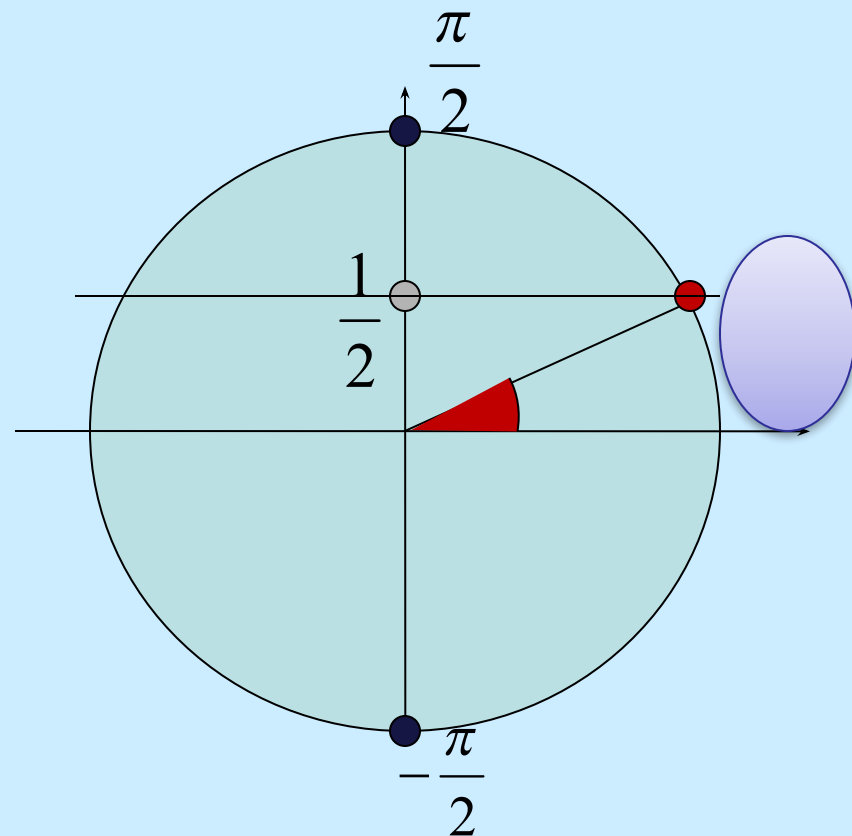
$$\arcsin \frac{1}{2} = \text{[empty oval]}$$

$$\arcsin \frac{\sqrt{3}}{2} = \text{[empty oval]}$$

$$\arcsin 1 = \text{[empty oval]}$$

$$\arcsin \frac{\sqrt{2}}{2} = \text{[empty oval]}$$

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



Вычислить:

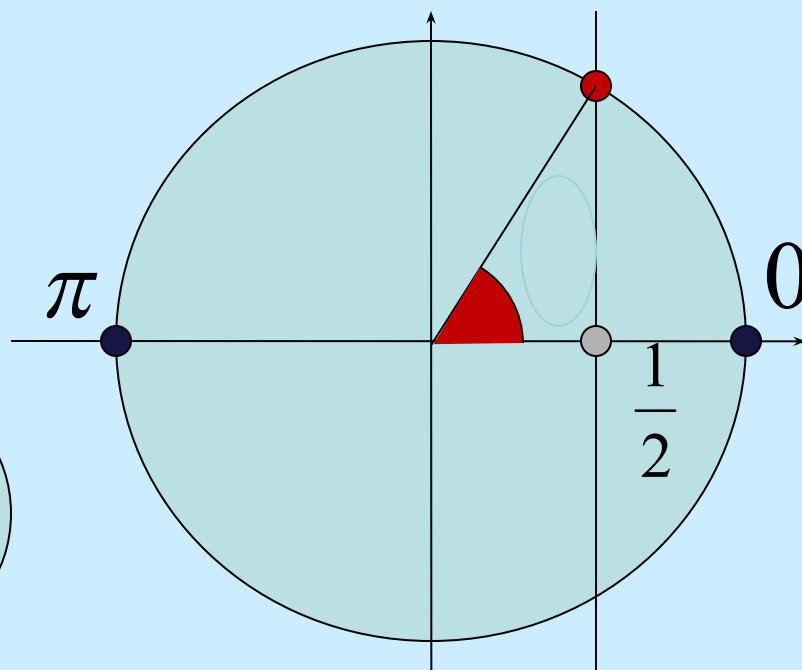
$[0; \pi]$

$$\arccos \frac{1}{2} = \text{○}$$

$$\arccos 1 = \text{○}$$

$$\arccos \frac{\sqrt{2}}{2} = \text{○}$$

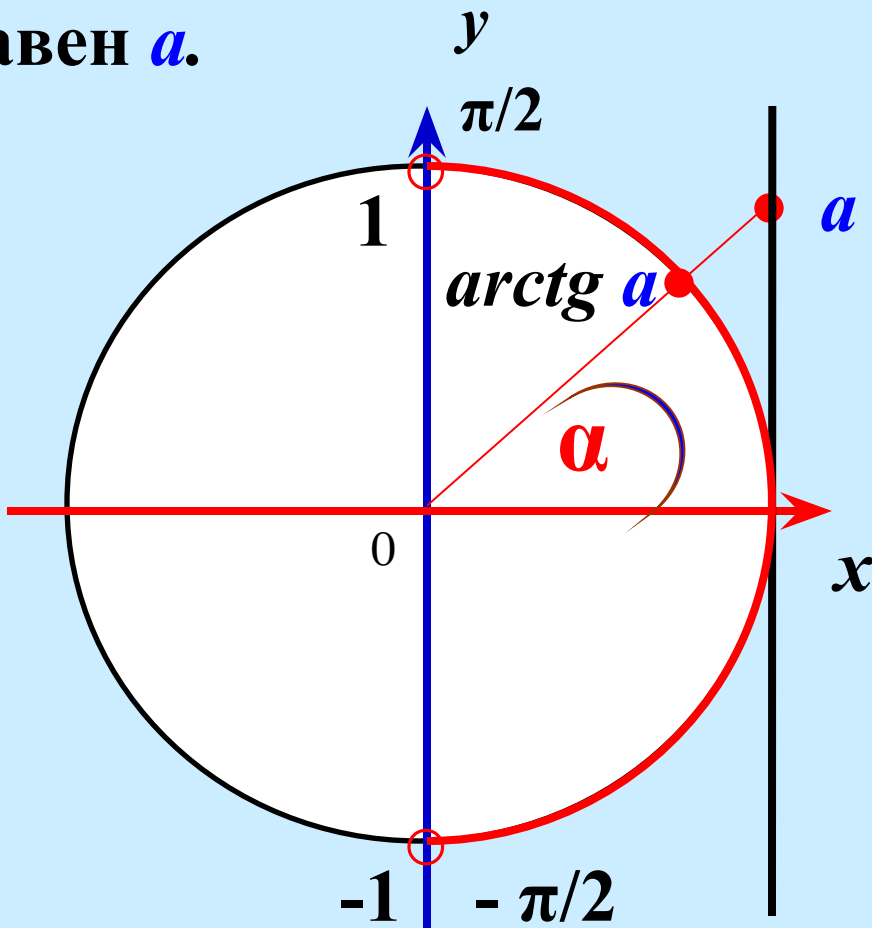
$$\arccos \frac{\sqrt{3}}{2} = \text{○}$$



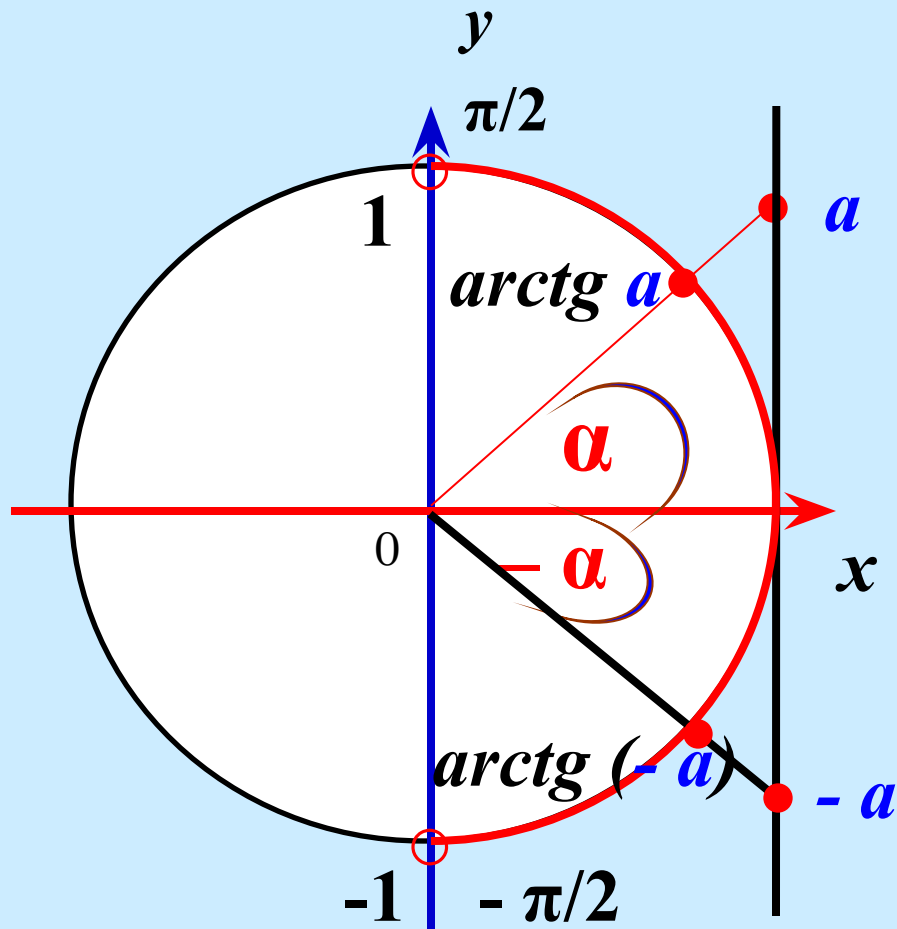
Арктангенсом числа a называется такой угол α из интервала $(-\pi/2; \pi/2)$, тангенс которого равен a .

$$\operatorname{tg} \alpha = a$$

$$\alpha = \operatorname{arctg} a$$



$$\operatorname{arctg}(-a) = -\operatorname{arctg} a$$



Формулы для арктангенса числа

Для любого числа a и угла $\alpha \in (-\pi/2; \pi/2)$

$$\operatorname{tg} \alpha = a$$

$$\alpha = \operatorname{arctg} a$$

$$\operatorname{arctg} (-a) = -\operatorname{arctg} a$$

$$\operatorname{tg} (\operatorname{arctg} a) = a$$

$$\operatorname{arctg} (\operatorname{tg} \alpha) = \alpha$$

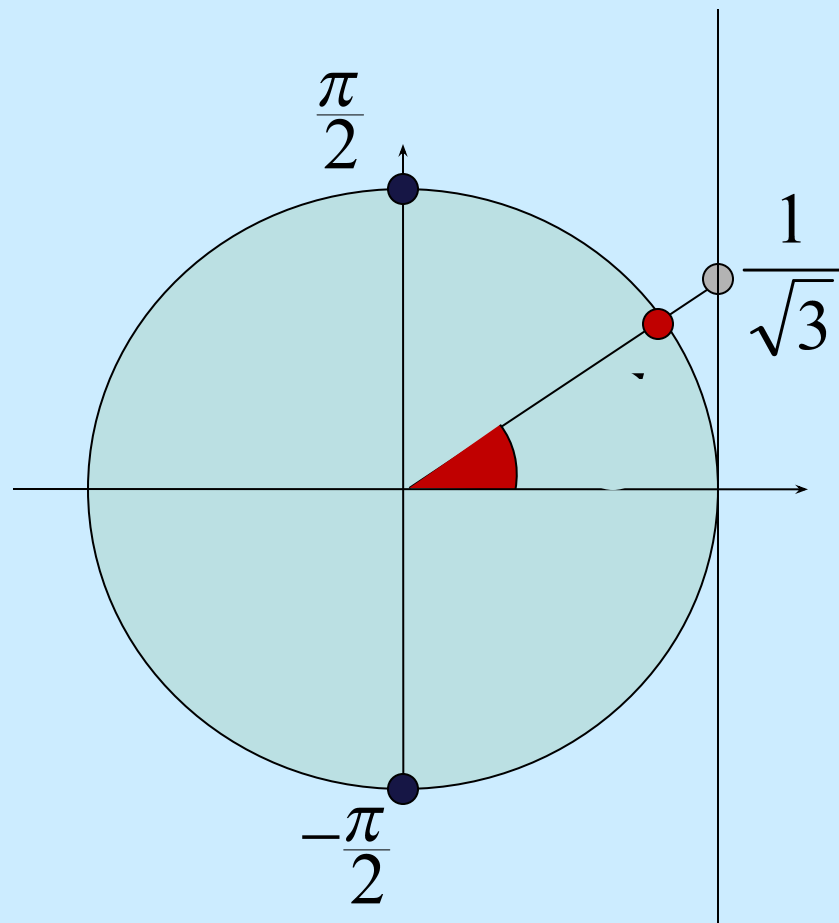
Вычислить:

$$\operatorname{arctg} \frac{1}{\sqrt{3}} = \text{○}$$

$$\operatorname{arctg} \sqrt{3} = \text{○}$$

$$\operatorname{arctg} 1 = \text{○}$$

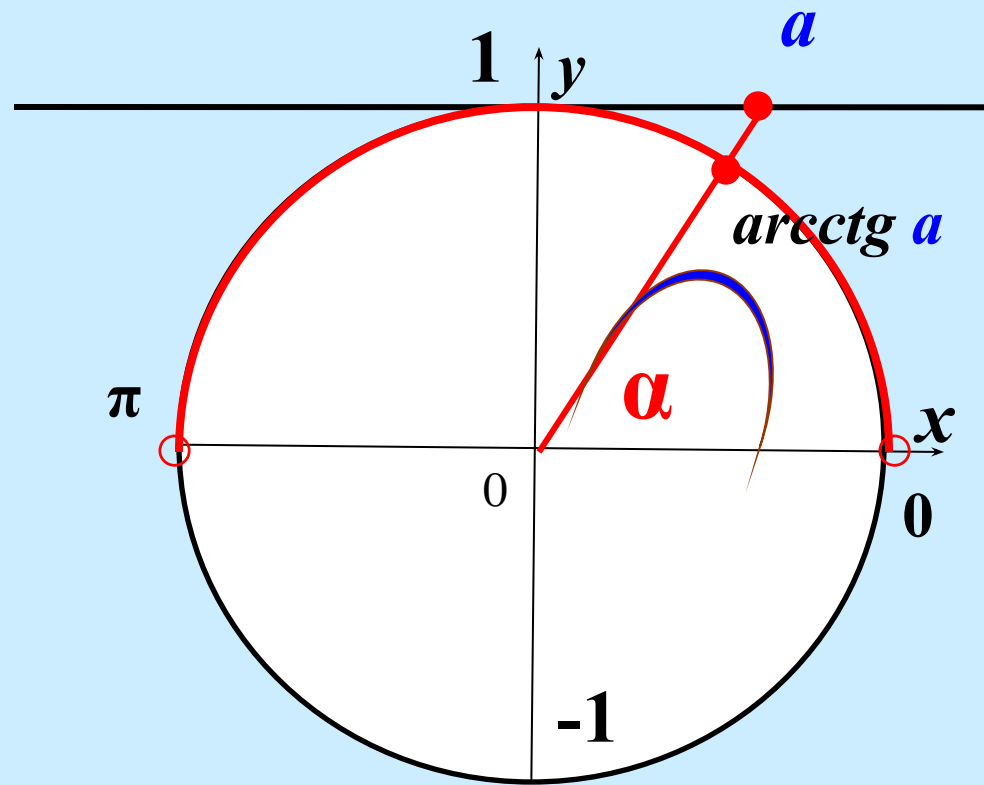
$$\left(-\frac{\pi}{2}, \frac{\pi}{2} \right)$$



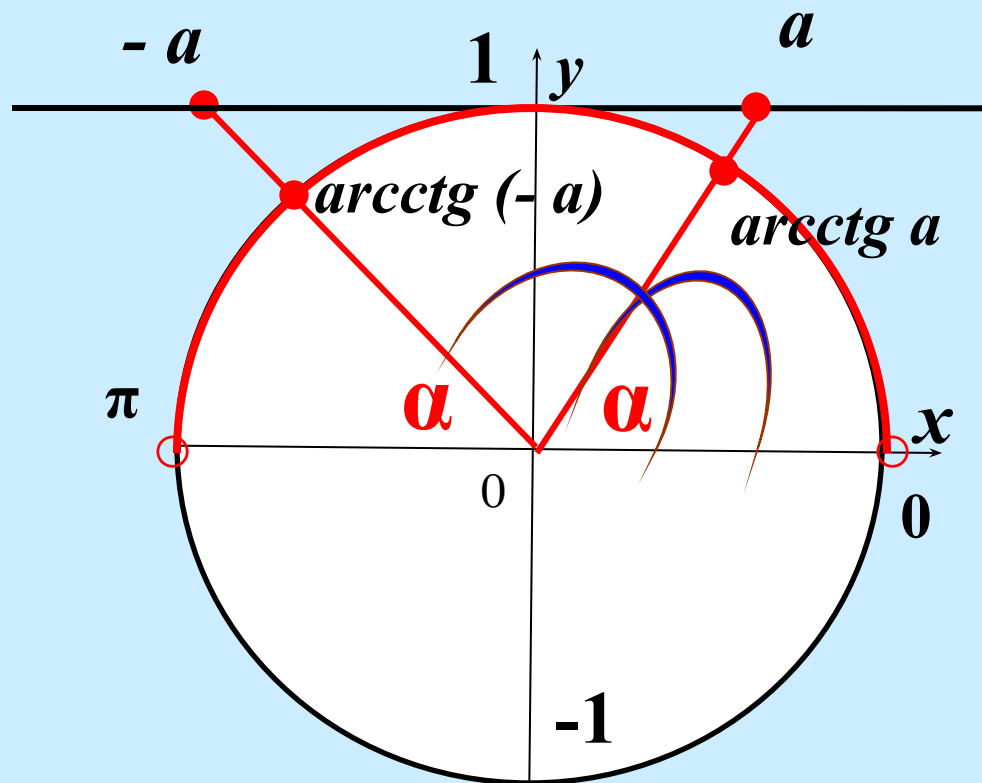
Арккотангенсом числа a называется такой угол α из интервала $(0; \pi)$, котангенс которого равен a .

$$\operatorname{ctg} \alpha = a$$

$$\alpha = \operatorname{arccctg} a$$



$$\operatorname{arcctg}(-a) = \pi - \operatorname{arcctg} a$$



Формулы для арккотангенса числа

Для любого числа a и угла $\alpha \in (-\pi/2; \pi/2)$

$$\operatorname{ctg} \alpha = a$$

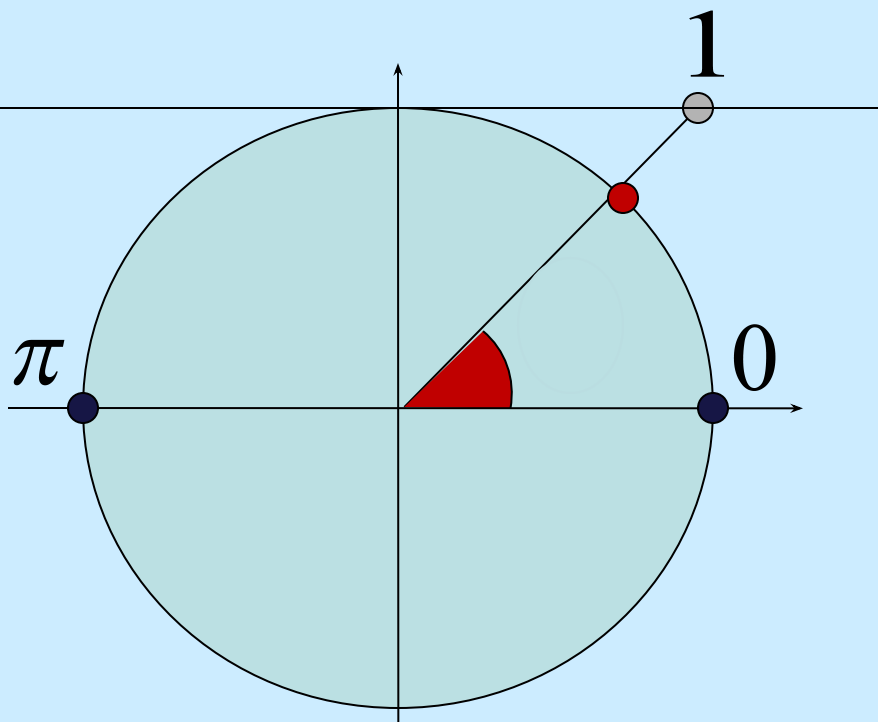
$$\alpha = \operatorname{arcctg} a$$

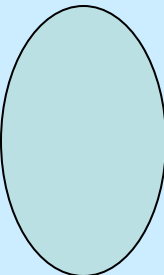
$$\operatorname{arcctg} (-a) = -\operatorname{arcctg} a$$

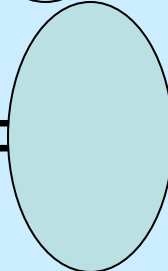
$$\operatorname{ctg} (\operatorname{arcctg} a) = a$$

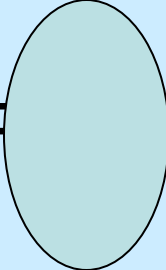
$$\operatorname{arcctg} (\operatorname{ctg} \alpha) = \alpha$$

$(0; \pi)$



$\text{arcctg } 1 =$ 

$\text{arcctg } \sqrt{3} =$ 

$\text{arcctg } \frac{1}{\sqrt{3}} =$ 

$$\arcsin \frac{\sqrt{3}}{2} + \arccos \frac{\sqrt{3}}{2} =$$

$$\arccos \frac{1}{2} + \arcsin \frac{1}{2} =$$

ОТВЕТЫ

Сравните числа:

$$\arcsin\left(-\frac{1}{2}\right) \quad \text{○} \quad \arccos\frac{\sqrt{3}}{2}$$

$$\arccos\left(-\frac{1}{2}\right) \quad \text{○} \quad \textit{arcctg}(-1)$$

$$\textit{arcctg}\sqrt{3} \quad \text{○} \quad \arcsin\frac{1}{2}$$

Вычислить

$$2\arcsin\left(-\frac{\sqrt{3}}{2}\right) + \operatorname{arctg}(-1) + \arccos\frac{\sqrt{2}}{2} = \text{○}$$

$$3\arcsin\frac{1}{2} + 4\arccos\left(-\frac{1}{\sqrt{2}}\right) - \operatorname{arcctg}(-\sqrt{3}) = \text{○}$$

