

$$\operatorname{arctg} 1 = A$$

$\operatorname{arctg} x$  a  $\operatorname{tg} x$  sú inverzné na  $\langle -\pi/2, \pi/2 \rangle$

$$\operatorname{tg}(\operatorname{arctg} 1) = \operatorname{tg} A$$

$$1 = \operatorname{tg} A$$

$$1 = \frac{\sin A}{\cos A}$$

$$\sin A = \cos A \Rightarrow A = \frac{\pi}{4}$$

$$\operatorname{arctg} 1 = \frac{\pi}{4}$$

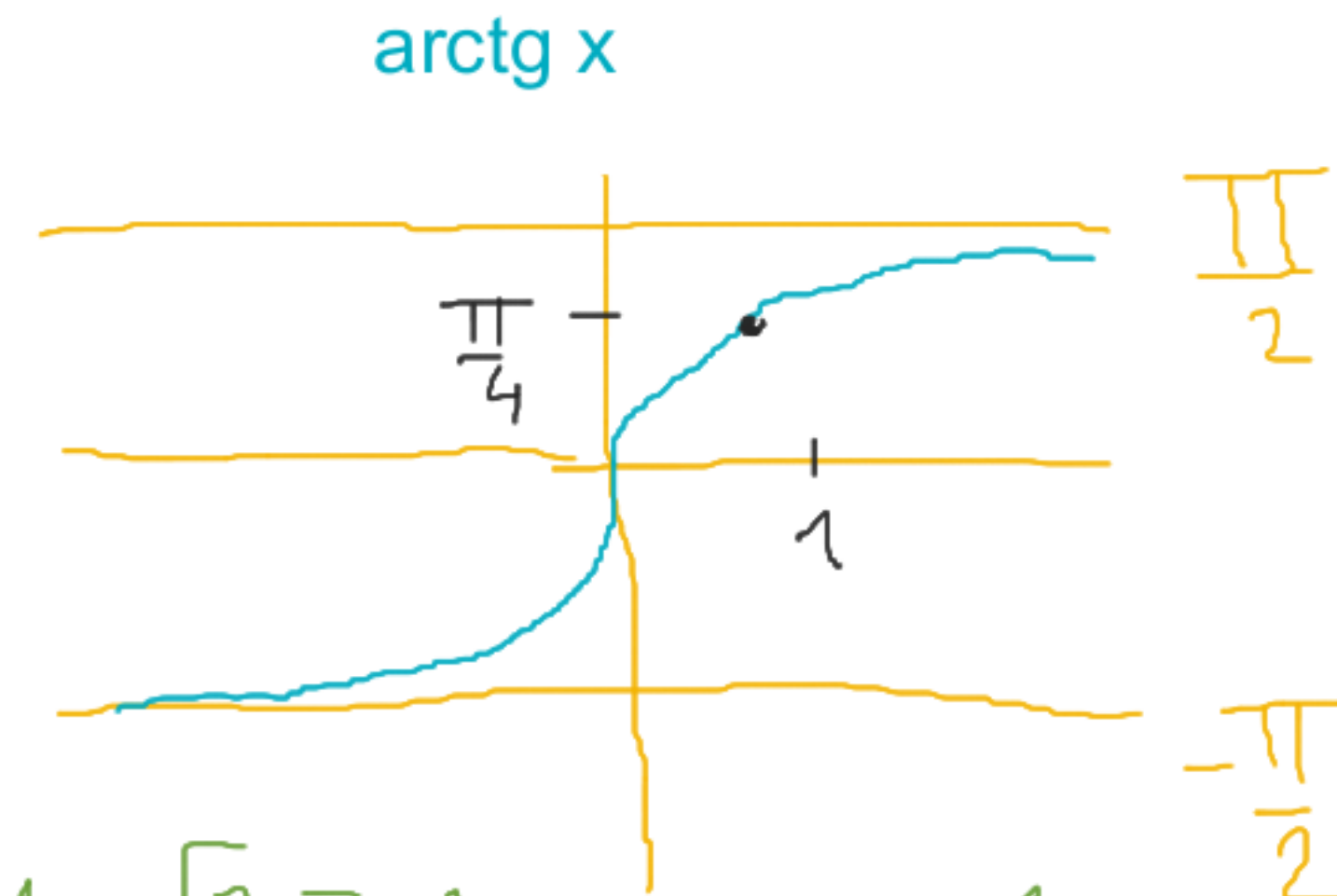
$$\operatorname{arctg}(-1) = -\operatorname{arctg} 1 \Rightarrow \operatorname{arctg}(-1) = -\frac{\pi}{4}$$

pretože  $\operatorname{arctg} x$  je nepárna funkcia

nepárna funkcia:  $\forall x \in D_f \quad f(-x) = -f(x)$

Ďalšie hodnoty pre  $\operatorname{arctg} x$  nechávame  
v tvare:  $\operatorname{arctg} 2$ ,  $\operatorname{arctg} 5$ ,  $\operatorname{arctg}(-\sqrt{7})$

z grafu:  
 $\operatorname{arctg} 0 = 0$



$$\operatorname{arctg} \sqrt{3} = A$$

$$\sqrt{3} = \frac{\sqrt{3}}{\frac{1}{2}}$$

$$A = \frac{\pi}{3}$$

$$\operatorname{arctg} \sqrt{3} = \frac{\pi}{3}$$

$$\operatorname{arctg} \frac{1}{\sqrt{3}} = \frac{\pi}{6}$$

$$\operatorname{arctg} \frac{1}{\sqrt{3}} = A$$

$$\frac{1}{\sqrt{3}} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}}$$

$$A = \frac{\pi}{6}$$

$$\frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

# $\ln x$ v reálnych číslach



$$\ln 1 = 0$$

$$\ln e = 1$$

Ďalšie hodnoty pre  $\ln x$  nechávame  
v tvare:  $\ln 2$ ,  $\ln 5$ ,  $\ln \sqrt{7}$