$$a|b \xrightarrow[\text{diff}]{\curvearrowright} \mathbb{R}\colon \quad {}^{x}_{-}\curvearrowright \begin{cases} >0 & \geqslant 0 \\ =0 & \\ \leqslant 0 & <0 \end{cases} \underset{\text{MWS}}{\Rightarrow} \curvearrowright \begin{cases} \text{s-iso} & \text{w-iso} \\ \text{cst} & \\ \text{w-anti} & \text{s-anti} \end{cases}$$

$$x^n \text{ s-iso on } \mathbb{R}_+$$

$$\curvearrowright \text{ stet/diff/bij } / {}^{y}_{-}\overset{-1}{\curvearrowright}$$

$$x \in \mathbb{R} \to \mathbb{R} \ni x^{2k+1}\colon \quad \text{streng isoton/bij } \mathbb{R}^{2k+1} = \mathbb{R}\colon \quad g(y) = \sqrt[2k+1]{y} \text{ nicht diff in } 0/ \text{ speziell } x^3$$

$$g(f(x)) = x \Rightarrow g'(0)\, f'(0) = 1\colon \quad f'(0) = 0$$

$$0|\frac{\pi}{2} \xrightarrow{\curvearrowright = \cos^3 - \sin^3} -1|1\colon \quad {}^{0}_{-}\overset{-1}{\curvearrowright}$$

$$x \in \mathbb{R} \xrightarrow{\curvearrowright} \mathbb{R} \ni {}^{x}\sin - 2x\colon \quad {}^{0}_{-}\overset{-1}{\curvearrowright}$$

$$(0|\pi) \xrightarrow{\cot} \mathbb{R}\colon \quad \mathbb{R} \xrightarrow[\text{diff}]{\overset{-1}{\cot}} (0|\pi)\colon \quad {}^{y}_{-}\overset{-1}{\cot}$$

$$-\frac{\pi}{2}|\frac{\pi}{2} \xrightarrow[\text{diff/bij}]{\tan} \mathbb{R}\colon \quad \text{Abl}: \quad \mathbb{R} \xrightarrow[\text{diff}]{\overset{-1}{\tan}} -\frac{\pi}{2}|\frac{\pi}{2}\colon \quad {}^{y}_{-}\overset{-1}{\tan}$$

$$-\frac{\pi}{2}|\frac{\pi}{2} \xrightarrow{\sin} -1|1 \text{ streng mon wachsend/surj}: \quad -1|1 \xrightarrow[\text{diff}]{\overset{-1}{\sin}} -\frac{\pi}{2}|\frac{\pi}{2}\colon \quad {}^{y}_{-}\overset{-1}{\sin} = \frac{1}{\sqrt{1-y^2}}$$

$$e^x \text{ streng isoton on } \mathbb{R}\colon \quad e^{\mathbb{R}} = \mathbb{R}_{>}\colon \quad \underset{-}{\exp} = \exp\colon \quad e^x > 0$$

$$a > 0\colon \quad a^x = e^{x \log a} \text{ on } \mathbb{R}\colon \quad \text{Monotonie/Wertebereich } a^{\mathbb{R}} \begin{cases} a < 1 \\ a = 1 \\ a > 1 \end{cases}$$

$$j(x) = \frac{1}{x} \text{ beweis diff on } \mathbb{R}^{\times}\colon \quad \text{Ableitung}$$