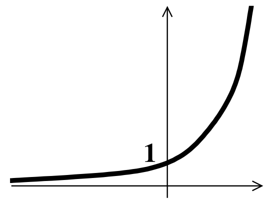
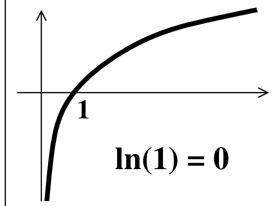
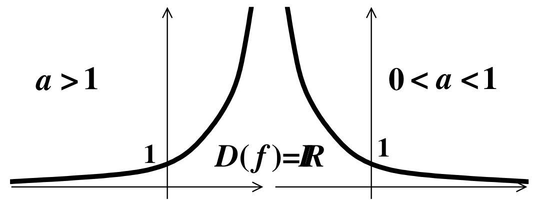
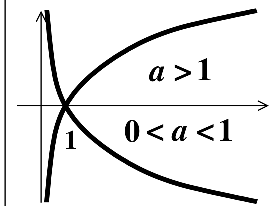
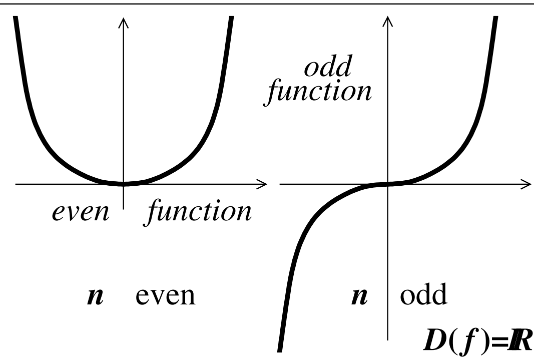
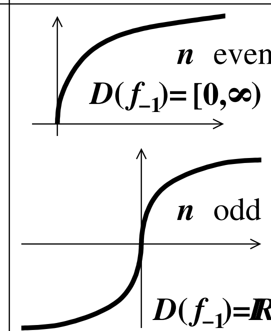
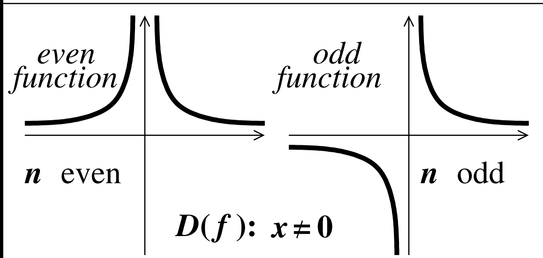
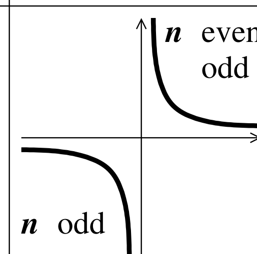
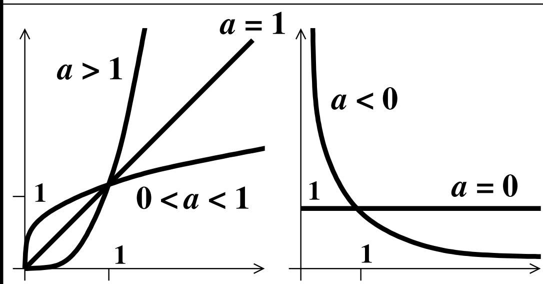
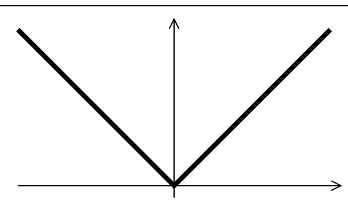
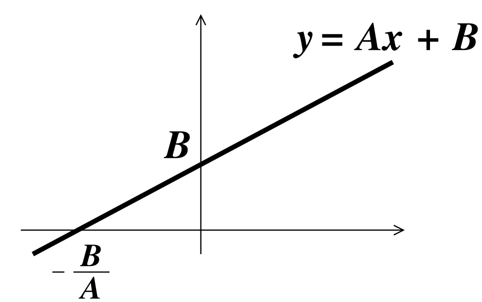
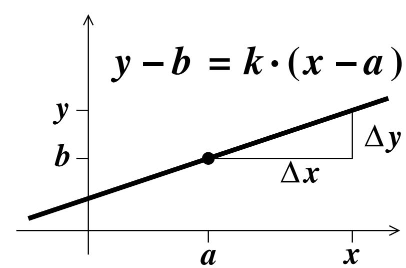
funct f	graph (with 1–1 restriction)	identities	f'	inverse f_{-1}	graph f_{-1}	identities	f_{-1}'
e^x	 $e^0 = 1$ $D(f)=\mathbb{R}$	$e^{xy} = (e^x)^y$ $e^{x+y} = e^x \cdot e^y$ $\ln(e^x) = x$ $e^{\ln(x)} = x,\ x>0$	e^x $\int f\,dx = e^x$	$\ln(x)$ $D(f_{-1}) = (0,\infty)$	 $\ln(1) = 0$	$\ln(x^A) = A\ln(x)$ $\ln(x\cdot y) = \ln(x)+\ln(y)$ $\ln\left(\frac{x}{y}\right) = \ln(x)-\ln(y)$ $\ln\left(\frac{1}{y}\right) = -\ln(x)$	$\frac{1}{x}$
a^x	 $D(f)=\mathbb{R}$	$a^{xy} = (a^x)^y$ $a^{x+y} = a^x \cdot a^y$ $\log_a(a^x) = x$ $a^{\log_a(x)} = x,\ x>0$	$\ln(a)\,a^x$ $\int f\,dx = \frac{1}{\ln(a)}a^x$	$\log_a(x)$ $D(f_{-1}) = (0,\infty)$		$\log_a(x^A) = A\log_a(x)$ $\log_a(x\cdot y) = \log_a(x)+\log_a(y)$ $\log_a\left(\frac{x}{y}\right) = \log_a(x)-\log_a(y)$	$\frac{1}{\ln(a)}\ \frac{1}{x}$
x^n $n\in\mathbb{N}$	 $D(f)=\mathbb{R}$	$x^{m+n} = x^m\cdot x^n$ $(x\cdot y)^n = x^n\cdot y^n$ $\left(\frac{x}{y}\right)^n = \frac{x^n}{y^n}$	$n\cdot x^{n-1}$ $\int f\,dx = \frac{1}{n+1}x^{n+1}$	$x^{\frac{1}{n}} = \sqrt[n]{x}$		$\sqrt[n]{x\cdot y} = \sqrt[n]{x}\cdot\sqrt[n]{y}$ $\sqrt[n]{\frac{x}{y}} = \frac{\sqrt[n]{x}}{\sqrt[n]{y}}$	$\frac{1}{n}x^{\frac{1}{n}-1}$ $[\sqrt{x}\,]' = \frac{1}{2\sqrt{x}}$
$\frac{1}{x^n} = x^{-n}$ $n\in\mathbb{N}$	 $D(f)$: $x\neq 0$	see ↕	$-n\cdot x^{-n-1}$ $\int f\,dx = \ln\lvert x\rvert,\ n=1$	$x^{-\frac{1}{n}} = \frac{1}{\sqrt[n]{x}}$			
x^a $a\in\mathbb{R}$		$x^{a+b} = x^a\cdot x^b$ $(x\cdot y)^a = x^a\cdot y^a$ $\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$	$a\cdot x^{a-1}$ $\int f\,dx = \begin{cases}\ln\lvert x\rvert, & a=-1\\ \frac{1}{a+1}x^{a+1}\end{cases}$				
$\lvert x\rvert$	 $D(f)=\mathbb{R}$	$\lvert x\rvert = \begin{cases}x, & x\geq 0;\\ -x, & x<0\end{cases}$ $= \begin{cases}x, & x>0;\\ -x, & x\leq 0.\end{cases}$	$\begin{cases}1, & x>0;\\ \text{DNE}, & x=0;\\ -1, & x<0.\end{cases}$				





$k = \frac{\Delta y}{\Delta x}$