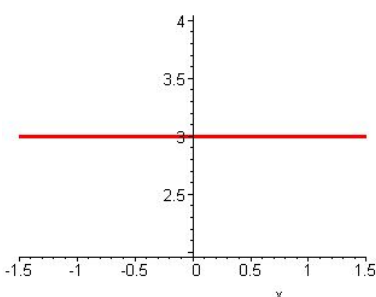
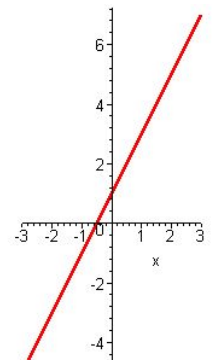
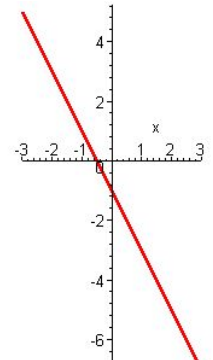
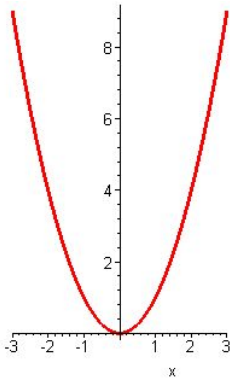
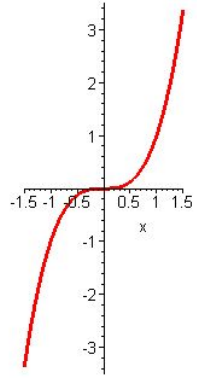


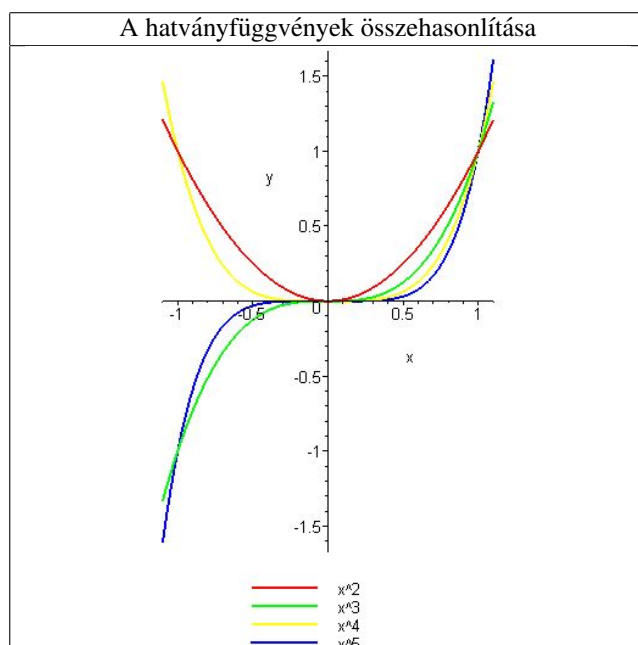
Konstans függvény	$f(x) = c, c \in \mathbf{R}$	$f(x) = 3$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = \{c\}$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = c$ • $\lim_{x \rightarrow \infty} f(x) = c$ • $f'(x) = 0$ • $D_{f'} = (-\infty, \infty), R_{f'} = \{0\}$ • $\int c dx = cx + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = \{3\}$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 3,$ • $\lim_{x \rightarrow \infty} f(x) = 3$ • $f'(x) = 0$ • $D_{f'} = (-\infty, \infty), R_{f'} = \{0\}$ • $\int 3 dx = 3x + C$

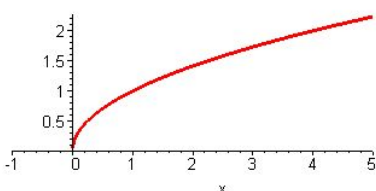
Lineáris függvény	$f(x) = ax + b, a > 0, b \in \mathbf{R}$	$f(x) = 2x + 1$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = a$ • $D_{f'} = (-\infty, \infty), R_{f'} = \{a\}$ • $\int (ax + b) dx = \frac{ax^2}{2} + bx + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = 2$ • $D_{f'} = (-\infty, \infty), R_{f'} = \{2\}$ • $\int (2x + 1) dx = x^2 + x + C$

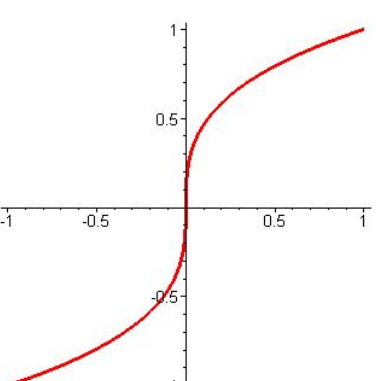
Lineáris függvény	$f(x) = ax + b, a < 0, b \in \mathbf{R}$	$f(x) = -2x - 1$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty$ • $\lim_{x \rightarrow \infty} f(x) = -\infty$ • $f'(x) = a$ • $D_{f'} = (-\infty, \infty), R_{f'} = \{a\}$ • $\int (ax + b) dx = \frac{ax^2}{2} + bx + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty$ • $\lim_{x \rightarrow \infty} f(x) = -\infty$ • $f'(x) = -2$ • $D_{f'} = (-\infty, \infty), R_{f'} = \{-2\}$ • $\int (-2x - 1) dx = -x^2 - x + C$

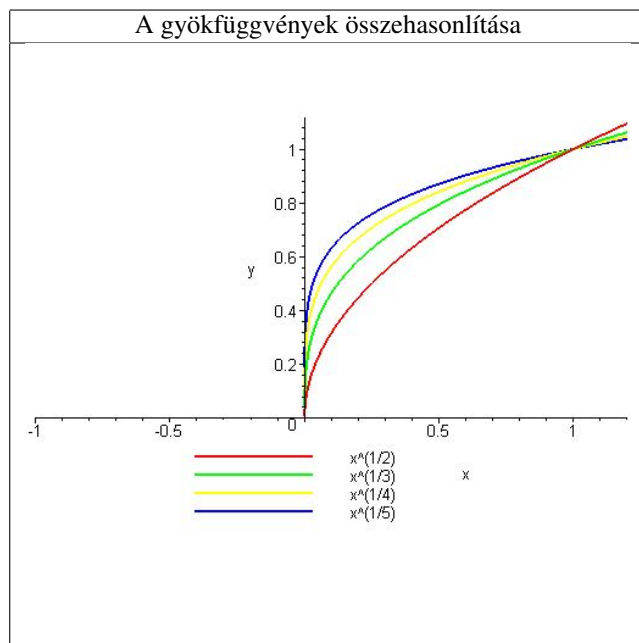
Hatványfüggvény	$f(x) = x^n, n$ páros pozitív egész	$f(x) = x^2$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = [0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = nx^{n-1}$ • $D_{f'} = (-\infty, \infty), R_{f'} = (-\infty, \infty)$ • $\int x^n dx = \frac{x^{n+1}}{n+1} + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = [0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = 2x,$ • $D_{f'} = (-\infty, \infty), R_{f'} = (-\infty, \infty)$ • $\int x^2 dx = \frac{x^3}{3} + C$

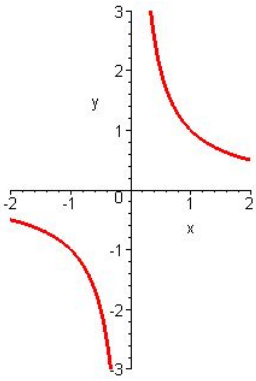
Hatványfüggvény	$f(x) = x^n, n$ páratlan pozitív egész	$f(x) = x^3$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty,$ • $f'(x) = nx^{n-1}$ • $D_{f'} = (-\infty, \infty), R_{f'} = [0, \infty)$ • $\int x^n dx = \frac{x^{n+1}}{n+1} + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = 3x^2$ • $D_{f'} = (-\infty, \infty), R_{f'} = [0, \infty)$ • $\int x^3 dx = \frac{x^4}{4} + C$

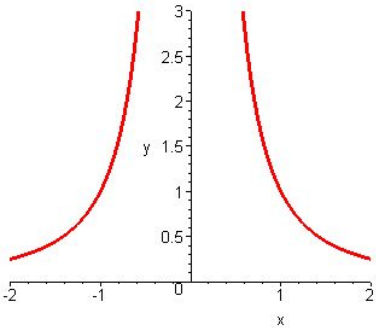


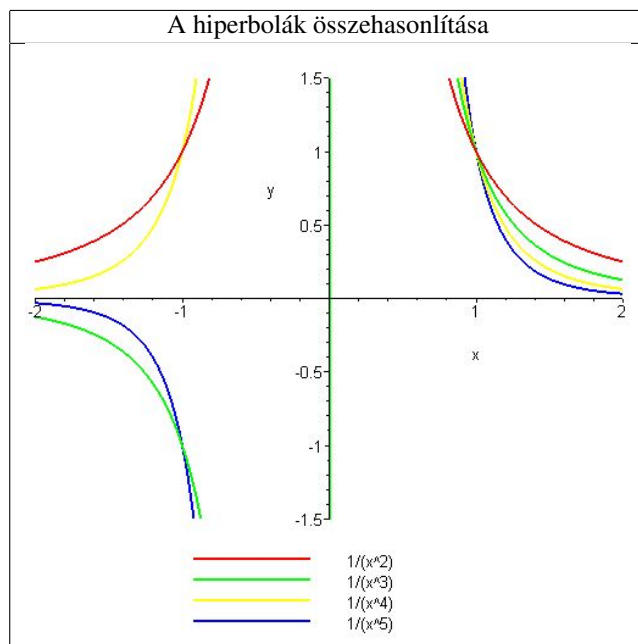
Gyökfüggvény	$f(x) = \sqrt[n]{x} = x^{\frac{1}{n}}, n$ páros pozitív egész	$f(x) = \sqrt{x}$
	<ul style="list-style-type: none"> • $D_f = [0, \infty), R_f = [0, \infty)$ • f a 0-ban balról folytonos, mindenütt máshol folytonos • $\lim_{x \rightarrow 0^+} f(x) = 0$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{n} \cdot x^{\frac{1}{n}-1} = \frac{1}{n \cdot \sqrt[n]{x^{n-1}}}$ • $D_{f'} = (0, \infty), R_{f'} = (0, \infty)$ • $\int \sqrt[n]{x} dx = \int x^{\frac{1}{n}} dx = \frac{x^{\frac{1}{n}+1}}{\frac{1}{n}+1} + C$ 	<ul style="list-style-type: none"> • $D_f = [0, \infty), R_f = [0, \infty)$ • f a 0-ban balról folytonos, mindenütt máshol folytonos • $\lim_{x \rightarrow 0^+} f(x) = 0$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{2\sqrt{x}}$ • $D_{f'} = (0, \infty), R_{f'} = (0, \infty)$ • $\int \sqrt{x} dx = \frac{2}{3}x^{\frac{3}{2}} + C$

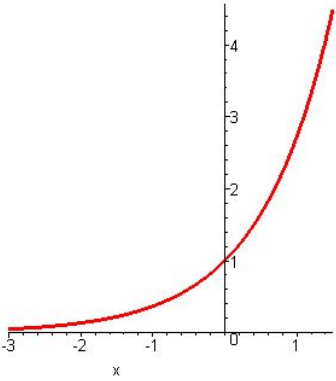
Gyökfüggvény	$f(x) = \sqrt[n]{x} = x^{\frac{1}{n}}, n$ páratlan pozitív egész	$f(x) = \sqrt[3]{x}$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{n} \cdot x^{\frac{1}{n}-1} = \frac{1}{n \cdot \sqrt[n]{x^{n-1}}}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (0, \infty)$ • $\int \sqrt[n]{x} dx = \int x^{\frac{1}{n}} dx = \frac{x^{\frac{1}{n}+1}}{\frac{1}{n}+1} + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty), R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty$ • $\lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{3\sqrt[3]{x^2}}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (0, \infty)$ • $\int \sqrt[3]{x} dx = \frac{3}{4}x^{\frac{4}{3}} + C$

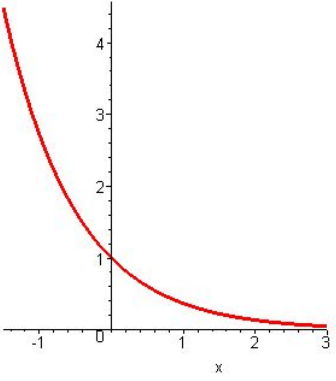


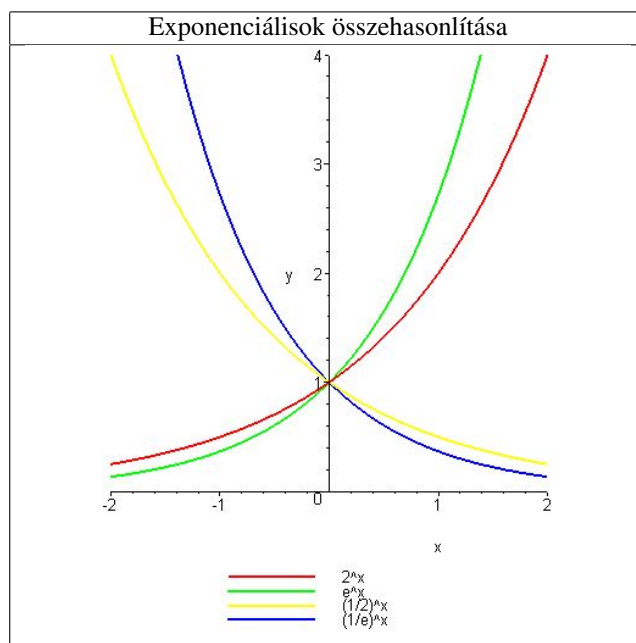
Hiperbola	$f(x) = \frac{1}{x^n}, n$ páratlan pozitív egész	$f(x) = \frac{1}{x}$
	<ul style="list-style-type: none"> • $D_f = (-\infty, 0) \cup (0, \infty)$ • $R_f = (-\infty, 0) \cup (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow 0^-} f(x) = -\infty$ • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = -\frac{n}{x^{n+1}}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (-\infty, 0)$ • $\int \frac{1}{x^n} dx = \frac{x^{-n+1}}{-n+1} + C, n \neq 1$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, 0) \cup (0, \infty)$ • $R_f = (-\infty, 0) \cup (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow 0^-} f(x) = -\infty$ • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = -\frac{1}{x^2}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (-\infty, 0)$ • $\int \frac{1}{x} dx = \ln x + C$

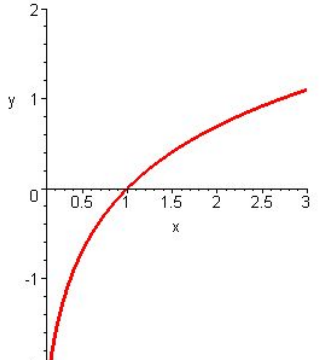
Hiperbola	$f(x) = \frac{1}{x^n}, n$ páros pozitív egész	$f(x) = \frac{1}{x^2}$
	<ul style="list-style-type: none"> • $D_f = (-\infty, 0) \cup (0, \infty)$ • $R_f = (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow 0^-} f(x) = \infty$ • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = -\frac{n}{x^{n+1}}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (-\infty, 0) \cup (0, \infty)$ • $\int \frac{1}{x^n} dx = \frac{x^{-n+1}}{-n+1} + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, 0) \cup (0, \infty)$ • $R_f = (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow 0^-} f(x) = \infty$ • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = -\frac{2}{x^3}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (-\infty, 0) \cup (0, \infty)$ • $\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

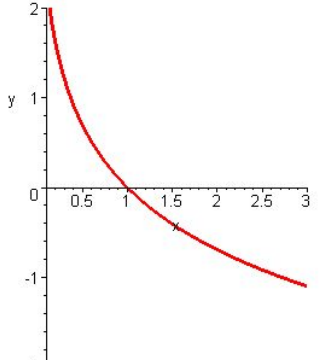


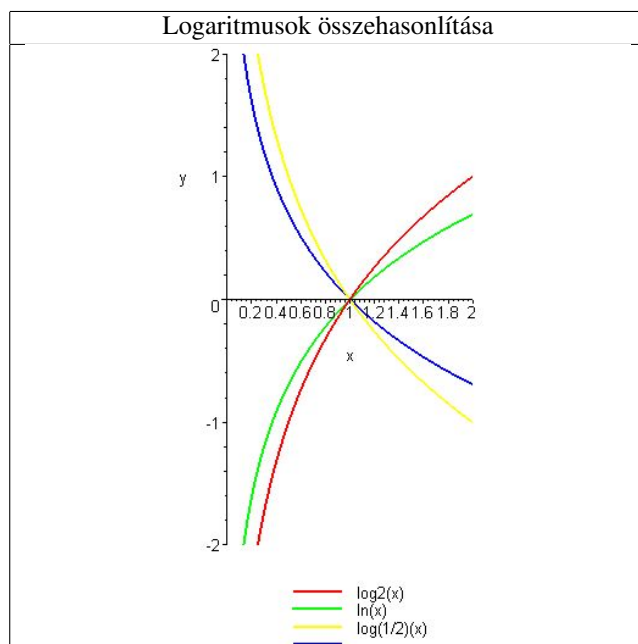
Exponenciális függvény	$f(x) = a^x, a > 1$	$f(x) = e^x$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = a^x \ln a$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (0, \infty)$ • $\int a^x dx = \frac{a^x}{\ln a} + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = e^x$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (0, \infty)$ • $\int e^x dx = e^x + C$

Exponenciális függvény	$f(x) = a^x, 0 < a < 1$	$f(x) = \left(\frac{1}{e}\right)^x$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = a^x \ln a$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (-\infty, 0)$ • $\int a^x dx = \frac{a^x}{\ln a} + C$ 	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = \left(\frac{1}{e}\right)^x \ln \left(\frac{1}{e}\right) = -\left(\frac{1}{e}\right)^x$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (-\infty, 0)$ • $\int \left(\frac{1}{e}\right)^x dx = \frac{\left(\frac{1}{e}\right)^x}{\ln\left(\frac{1}{e}\right)} = -\left(\frac{1}{e}\right)^x + C$



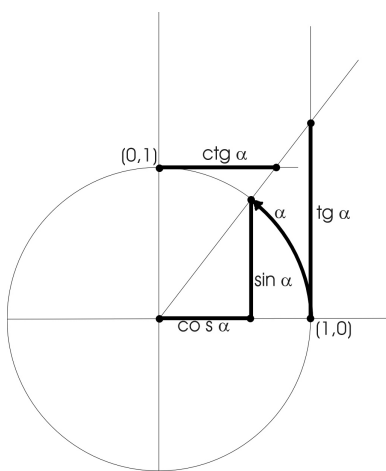
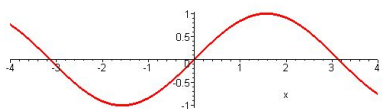
Logaritmus függvény	$f(x) = \log_a(x), a > 1$	$f(x) = \ln x$
	<ul style="list-style-type: none"> • $D_f = (0, \infty)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow 0^+} f(x) = -\infty, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{x \ln a}$ • $D_{f'} = (0, \infty)$ • $R_{f'} = (0, \infty)$ 	<ul style="list-style-type: none"> • $D_f = (0, \infty)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow 0^+} f(x) = -\infty, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{x}$ • $D_{f'} = (0, \infty)$ • $R_{f'} = (0, \infty)$

Logaritmus függvény	$f(x) = \log_a(x), 0 < a < 1$	$f(x) = \log_{\frac{1}{e}}(x)$
	<ul style="list-style-type: none"> • $D_f = (0, \infty)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = -\infty$ • $f'(x) = \frac{1}{x \ln a}$ • $D_{f'} = (0, \infty)$ • $R_{f'} = (-\infty, 0)$ 	<ul style="list-style-type: none"> • $D_f = (0, \infty)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = -\infty$ • $f'(x) = \frac{1}{x \ln(\frac{1}{e})} = -\frac{1}{x}$ • $D_{f'} = (0, \infty)$ • $R_{f'} = (-\infty, 0)$



Színuszfüggvény

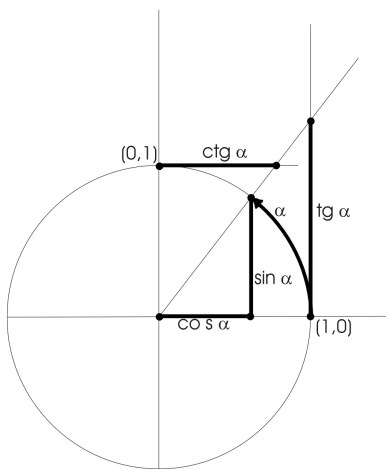
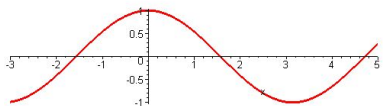
$$f(x) = \sin x$$



- $D_f = (-\infty, \infty)$
- $R_f = [-1, 1]$
- f mindenütt folytonos,
- $\lim_{x \rightarrow -\infty} f(x)$ és $\lim_{x \rightarrow \infty} f(x)$ nem létezik
- $f'(x) = \cos x$
- $D_{f'} = (-\infty, \infty)$
- $R_{f'} = [-1, 1]$
- $\int \sin x \, dx = -\cos x + C$

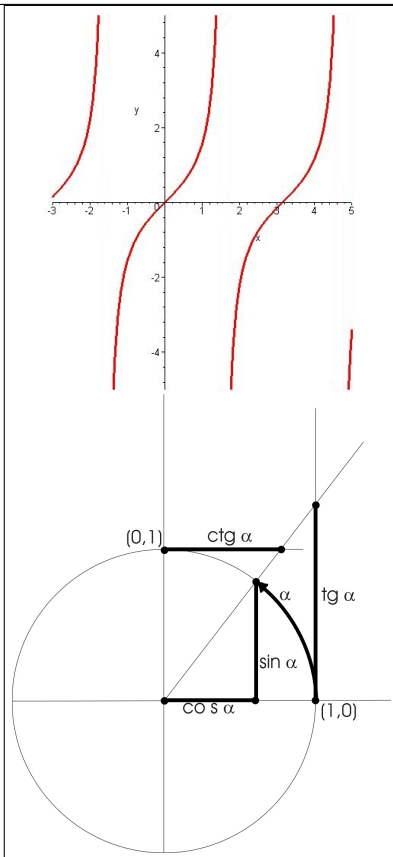
Koszínuszfüggvény

$$f(x) = \cos x$$



- $D_f = (-\infty, \infty)$
- $R_f = [-1, 1]$
- f mindenütt folytonos
- $\lim_{x \rightarrow -\infty} f(x)$ és $\lim_{x \rightarrow \infty} f(x)$ nem létezik
- $f'(x) = -\sin x$
- $D_{f'} = (-\infty, \infty)$
- $R_{f'} = [-1, 1]$
- $\int \cos x \, dx = \sin x + C$

Tangensfüggvény

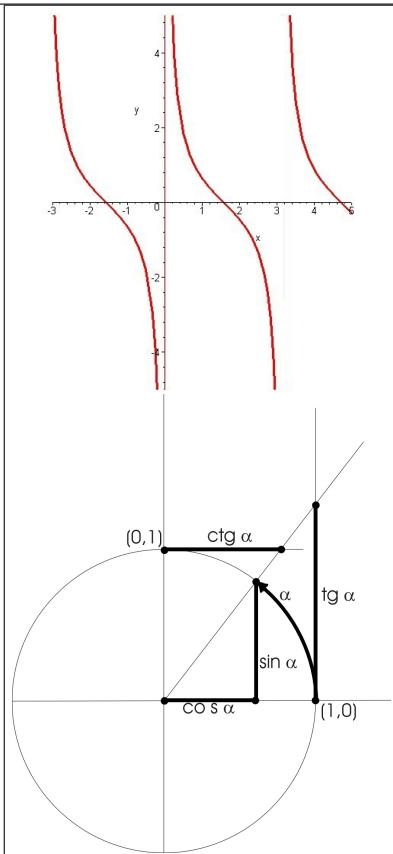


$$f(x) = \tan x$$

$$f(x) = \tan x = \frac{\sin x}{\cos x}$$

- $D_f = (-\infty, \infty) \setminus \{\frac{\pi}{2} + k\pi | k \in \mathbb{Z}\}$
- $R_f = (-\infty, \infty)$
- f mindenütt folytonos
- $\lim_{x \rightarrow \frac{\pi}{2} + k\pi -} f(x) = \infty$, $\lim_{x \rightarrow \frac{\pi}{2} + k\pi +} f(x) = -\infty$
- $\lim_{x \rightarrow -\infty} f(x)$ és $\lim_{x \rightarrow \infty} f(x)$ nem létezik
- $f'(x) = \frac{1}{\cos^2 x}$
- $D_{f'} = (-\infty, \infty) \setminus \{\frac{\pi}{2} + k\pi | k \in \mathbb{Z}\}$
- $R_{f'} = [1, \infty)$

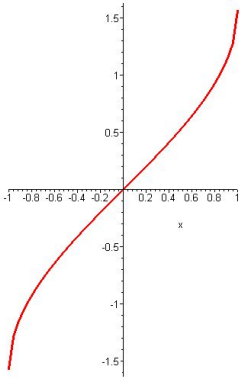
Kotangensfüggvény

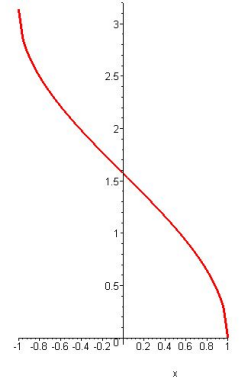


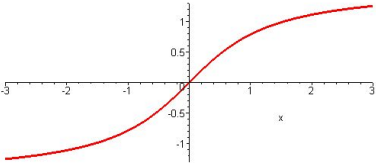
$$f(x) = \cot x$$

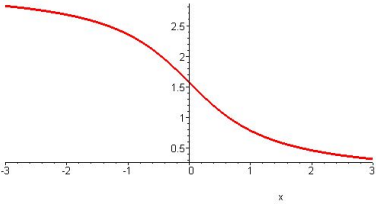
$$f(x) = \cot x = \frac{\cos x}{\sin x}$$

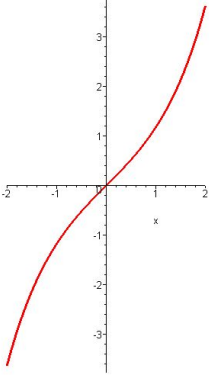
- $D_f = (-\infty, \infty) \setminus \{k\pi | k \in \mathbb{Z}\}$
- $R_f = (-\infty, \infty)$
- f mindenütt folytonos
- $\lim_{x \rightarrow k\pi -} f(x) = -\infty$, $\lim_{x \rightarrow k\pi +} f(x) = \infty$
- $\lim_{x \rightarrow -\infty} f(x)$ és $\lim_{x \rightarrow \infty} f(x)$ nem létezik
- $f'(x) = -\frac{1}{\sin^2 x}$
- $D_{f'} = (-\infty, \infty) \setminus \{k\pi | k \in \mathbb{Z}\}$
- $R_{f'} = (-\infty, -1]$

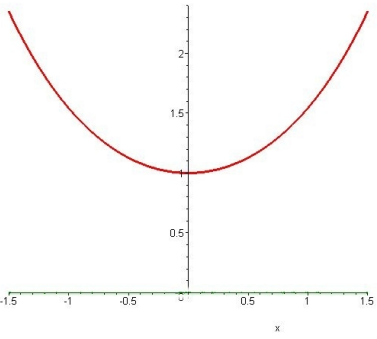
Arkuszszinusz függvény	$f(x) = \arcsin x$
	<ul style="list-style-type: none"> • $D_f = [-1, 1]$ • $R_f = \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$ • f a -1-ben jobbról, az 1-ben balról folytonos, mindenütt máshol folytonos • $\lim_{x \rightarrow -1^+} f(x) = -\frac{\pi}{2}, \lim_{x \rightarrow 1^-} f(x) = \frac{\pi}{2}$ • $f'(x) = \frac{1}{\sqrt{1-x^2}}$ • $D_{f'} = (-1, 1)$ • $R_{f'} = [1, \infty)$

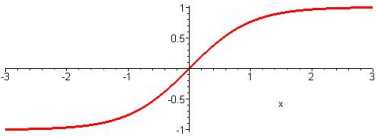
Arkuszkoszinusz függvény	$f(x) = \arccos x$
	<ul style="list-style-type: none"> • $D_f = [-1, 1]$ • $R_f = [0, \pi]$ • f a -1-ben jobbról, az 1-ben balról folytonos, mindenütt máshol folytonos • $\lim_{x \rightarrow -1^+} f(x) = \pi, \lim_{x \rightarrow 1^-} f(x) = 0$ • $f'(x) = -\frac{1}{\sqrt{1-x^2}}$ • $D_{f'} = (-1, 1)$ • $R_{f'} = (-\infty, -1]$

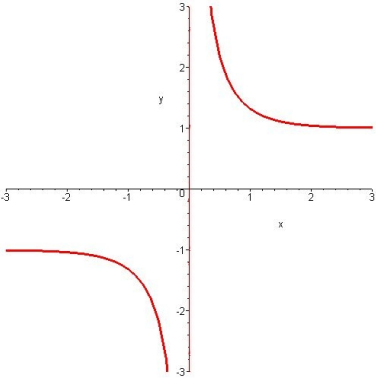
Arkusztangens függvény	$f(x) = \operatorname{arctg} x$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (-\frac{\pi}{2}, \frac{\pi}{2})$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\frac{\pi}{2}, \lim_{x \rightarrow \infty} f(x) = \frac{\pi}{2}$ • $f'(x) = \frac{1}{1+x^2}$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (0, 1]$

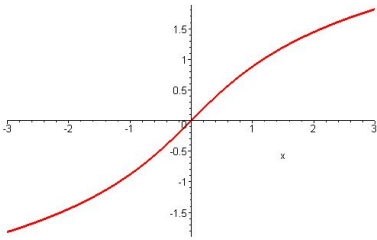
Arkuszkotangens függvény	$f(x) = \operatorname{arctg} x$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (0, \pi)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \pi, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = -\frac{1}{1+x^2}$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = [-1, 0)$

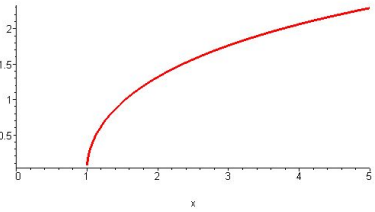
Színusz hiperbolikus függvény	$f(x) = \text{sh } x$
	$f(x) = \text{sh } x = \frac{e^x - e^{-x}}{2}$ <ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \text{ch } x$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = [1, \infty)$ • $\int \text{sh } x \, dx = \text{ch } x + C$

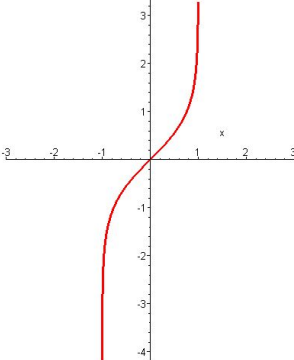
Koszínusz hiperbolikus függvény	$f(x) = \text{ch } x$
	$f(x) = \text{ch } x = \frac{e^x + e^{-x}}{2}$ <ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = [1, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \text{sh } x$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (-\infty, \infty)$ • $\int \text{ch } x \, dx = \text{sh } x + C$

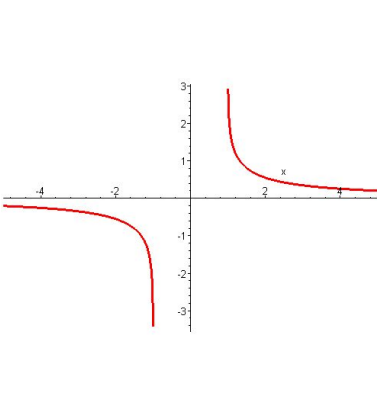
Tangens hiperbolikus függvény	$f(x) = \operatorname{th} x$
	$f(x) = \operatorname{th} x = \frac{\operatorname{sh} x}{\operatorname{ch} x}$ <ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (-1, 1)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -1, \lim_{x \rightarrow \infty} f(x) = 1$ • $f'(x) = \frac{1}{\operatorname{ch}^2 x}$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (0, 1]$

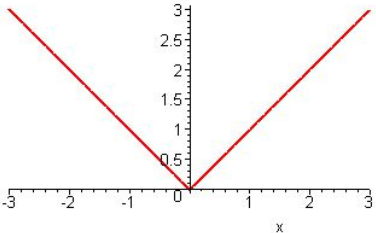
Kotangens hiperbolikus függvény	$f(x) = \operatorname{cth} x$
	$f(x) = \operatorname{cth} x = \frac{\operatorname{ch} x}{\operatorname{sh} x}$ <ul style="list-style-type: none"> • $D_f = (-\infty, 0) \cup (0, \infty)$ • $R_f = (-\infty, -1) \cup (1, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -1, \lim_{x \rightarrow 0^-} f(x) = -\infty$ • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 1$ • $f'(x) = -\frac{1}{\operatorname{sh}^2 x}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = (-\infty, 0)$

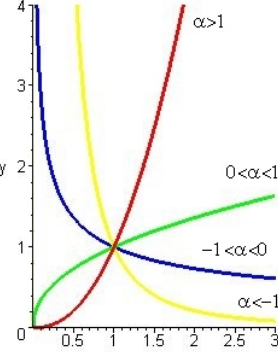
Area szinusz hiperbolikus függvény	$f(x) = \operatorname{arsh} x$
	<ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = -\infty, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{\sqrt{x^2+1}}$ • $D_{f'} = (-\infty, \infty)$ • $R_{f'} = (0, 1]$

Area koszinusz hiperbolikus függvény	$f(x) = \operatorname{arch} x$
	<ul style="list-style-type: none"> • $D_f = [1, \infty)$ • $R_f = [0, \infty)$ • f az 1-ben jobbról folytonos, mindenütt máshol folytonos • $\lim_{x \rightarrow 1^+} f(x) = 0, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \frac{1}{\sqrt{x^2-1}}$ • $D_{f'} = (1, \infty)$ • $R_{f'} = (0, \infty)$

Area tangens hiperbolikusz függvény	$f(x) = \operatorname{arth} x$
	<ul style="list-style-type: none"> • $D_f = (-1, 1)$ • $R_f = (-\infty, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -1^+} f(x) = -\infty, \lim_{x \rightarrow 1^-} f(x) = \infty$ • $f'(x) = \frac{1}{1-x^2}$ • $D_{f'} = (-1, 1)$ • $R_{f'} = [1, \infty)$

Area kotangens hiperbolikusz függvény	$f(x) = \operatorname{arch} x$
	<ul style="list-style-type: none"> • $D_f = (-\infty, -1) \cup (1, \infty)$ • $R_f = (-\infty, 0) \cup (0, \infty)$ • f mindenütt folytonos • $\lim_{x \rightarrow -\infty} f(x) = 0, \lim_{x \rightarrow -1^-} f(x) = -\infty$ • $\lim_{x \rightarrow 1^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0$ • $f'(x) = \frac{1}{1-x^2}$ • $D_{f'} = (-\infty, -1) \cup (1, \infty)$ • $R_{f'} = (-\infty, 0)$

Abszolút érték függvény	$f(x) = x $
	$f(x) = x = \begin{cases} -x & \text{ha } x < 0 \\ 0 & \text{ha } x = 0 \\ x & \text{ha } x > 0 \end{cases}$ <ul style="list-style-type: none"> • $D_f = (-\infty, \infty)$ • $R_f = [0, \infty)$ • f mindenütt folytonos, • $\lim_{x \rightarrow -\infty} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = \infty$ • $f'(x) = \begin{cases} -1 & \text{ha } x < 0 \\ 1 & \text{ha } x > 0 \end{cases}$ • $D_{f'} = (-\infty, 0) \cup (0, \infty)$ • $R_{f'} = \{-1, 1\}$

Általános hatvány függvény	$f(x) = x^\alpha, \alpha$ irracionális
	$f(x) = x^{\sqrt{5}}, \quad x^{\frac{1}{\sqrt{5}}}, \quad x^{-\sqrt{5}}, \quad x^{-\frac{1}{\sqrt{5}}}$ <ul style="list-style-type: none"> • $D_f = [0, \infty), \text{ ha } \alpha > 0, D_f = (0, \infty), \text{ ha } \alpha < 0$ • $R_f = [0, \infty), \text{ ha } \alpha > 0, R_f = (0, \infty), \text{ ha } \alpha < 0$ • f a nullában balról folytonos, mindenütt máshol folytonos, ha $\alpha > 0$ • f mindenütt folytonos, ha $\alpha < 0$ • $\lim_{x \rightarrow 0^+} f(x) = 0, \lim_{x \rightarrow \infty} f(x) = \infty, \text{ ha } \alpha > 0$ • $\lim_{x \rightarrow 0^+} f(x) = \infty, \lim_{x \rightarrow \infty} f(x) = 0, \text{ ha } \alpha < 0$ • $f'(x) = \alpha x^{\alpha-1}$ • $D_{f'} = (0, \infty)$ • $R_{f'} = (0, \infty), \text{ ha } \alpha > 0$ • $R_{f'} = (-\infty, 0), \text{ ha } \alpha < 0$ • $\int x^\alpha dx = \frac{x^{\alpha+1}}{\alpha+1} + C$