$\sqrt{\cos(\pi(x^2+y^2))}$	$D(f)=\{(x,y)\in R^2: \frac{4k-1}{2}\leq x^2+y^2\leq \frac{4k+1}{2}, k\geq 1\}\cup\{(x,y): x^2+y^2\leq \frac{1}{2}\}$
$\sqrt{x^2-y^2}$	$D(f)=\{(x,y)\in R^2: -\vert x\vert\leq y\leq \vert x\vert\}$
$\arcsin(x^2+y^2-2)$	$D(f)=\{(x,y)\in R^2: 1\leq x^2+y^2\leq 3\}$
$\frac{1}{\sqrt{1-xy}}$	$D(f)=\{(x,y)\in R^2: xy<1\}$
$\lim_{(x,y)\to(2,3)} 19x^2+6y-66$	28
$\lim_{(x,y)\to(1,1)} \frac{x-y}{x^2-y^2}$	$\frac{1}{2}$
$\lim_{(x,y)\to(2,-2)} \frac{x^2-y^2}{x^3+y^3}$	$\frac{1}{3}$
$\lim_{(x,y)\to(0,0)} \frac{\sqrt{9-xy}-3}{xy}$	$-\frac{1}{6}$
$\lim_{(x,y)\to(4,4)} \frac{y^2-xy}{\sqrt{y}-\sqrt{x}}$	16
$\lim_{(x,y)\to(1,1)} \frac{xy-x-2y+2}{1-y}$	1
$\lim_{(x,y)\to(3,4)} \frac{y-x-1}{\sqrt{x+1}-\sqrt{y}}$	-4
$\lim_{(x,y)\to(0,0)}(x^2+y^2)\cos\frac{1}{xy}$	0
$\lim_{(x,y)\to(0,0)} \frac{\sin(x^4+y^4)}{x^4+y^4}$	1
$\lim_{()x,y)\to(0,0)} \frac{x+y}{x-y}$	Neexistuje
$\lim_{(x,y)\to(3,3)} \frac{x+y}{x-y}$	Neexistuje
$\lim_{(x,y)\to(0,0)} \frac{y^2}{y^2+x^4}$	Neexistuje
$f(x,y)=(\sin^2 x-3\cos^2 y)^{19}$	$\frac{\partial f}{\partial x}=19(\sin^2 x-3\cos^2 y)^{18}\sin 2x, \quad \frac{\partial f}{\partial y}=57(\sin^2 x-3\cos^2 y)^{18}\sin 2x$
$f(x,y)=\sqrt{x(3y^3-x^2)}$	$\frac{\partial f}{\partial x}=\frac{3}{2}\frac{y^3-x^2}{\sqrt{x(3y^3-x^2)}}, \quad \frac{\partial f}{\partial y}=\frac{9}{2}\frac{\sqrt{x}y^2}{\sqrt{3y^3-x^2}}$
$f(x,y)=\operatorname{arctg}\frac{x-y}{1+xy}$	$\frac{\partial f}{\partial x}=\frac{1}{1+x^2}, \quad \frac{\partial f}{\partial y}=-\frac{1}{1+y^2}$
$f(x,y)=\arcsin\sqrt{\frac{x-y}{x+y}}$	$\frac{\partial f}{\partial x}=\frac{1}{\sqrt{2}}\cdot\frac{1}{\sqrt{x-y}}\cdot\frac{\sqrt{y}}{x+y}, \quad \frac{\partial f}{\partial y}=-\frac{1}{\sqrt{2y}}\cdot\frac{1}{\sqrt{x-y}}\cdot\frac{x}{x+y}$
$f(x,y,z)=\frac{x}{y}+\frac{y}{z}-\frac{z}{x}$	$\frac{\partial f}{\partial x}=\frac{1}{y}+\frac{z}{x^2}, \quad \frac{\partial f}{\partial y}=-\frac{x}{y^2}+\frac{1}{z}, \quad \frac{\partial f}{\partial z}=-\frac{y}{z^2}-\frac{1}{x}$
$f(x,y,z)=\frac{1}{\sqrt{x^2+y^2+z^2}}$	$\frac{\partial f}{\partial x}=-\frac{x}{(x^2+y^2+z^2)^{\frac{3}{2}}}, \quad \frac{\partial f}{\partial y}=-\frac{y}{(x^2+y^2+z^2)^{\frac{3}{2}}}, \quad \frac{\partial f}{\partial z}=-\frac{z}{(x^2+y^2+z^2)^{\frac{3}{2}}}$
$f(x,y,z)=\sqrt{y\cos z+x\sin z}$	$\frac{\partial f}{\partial x}=\frac{1}{2}\frac{\sin z}{\sqrt{y\cos z+x\sin z}}, \quad \frac{\partial f}{\partial y}=\frac{1}{2}\frac{\cos z}{\sqrt{y\cos z+x\sin z}}, \quad \frac{\partial f}{\partial z}=\frac{1}{2}\frac{x\cos z-y\sin z}{\sqrt{y\cos z+x\sin z}}$