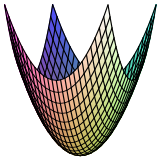
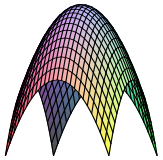
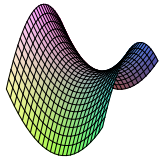
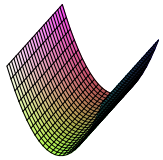
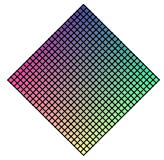
ÜBERSICHT: KONVEXITÄT & DEFINITHEIT

$f(x,y)$	x^2+y^2	$-x^2-y^2$	x^2-y^2	x^2	0
					
	konvex	konkav	noch konkav	(nicht strikt)	auch konkav
$H = f''(x,y)$	$\begin{pmatrix} 2 & 0 \\ 0 & 2 \end{pmatrix}$	$\begin{pmatrix} -2 & 0 \\ 0 & -2 \end{pmatrix}$	$\begin{pmatrix} 2 & 0 \\ 0 & -2 \end{pmatrix}$	$\begin{pmatrix} 2 & 0 \\ 0 & 0 \end{pmatrix}$	$\begin{pmatrix} 0 & 0 \\ 0 & 0 \end{pmatrix}$
Eigenwerte	$2;\ 2$	$-2;\ -2$	$2;\ -2$	$2;\ 0$	$0;\ 0$
Definitheit	definit	definit	indefinit	positiv	positiv und negativ
	$H \succ 0$	$H \prec 0$	$H \curlywedge 0$	$H \succeq 0$	$H \succeq 0 \ \wedge \ H \preceq 0$
$\lvert H_1 \rvert$ $\lvert H_2 \rvert$	4 $\oplus$	4 $\oplus$	-4 $\ominus$ $\neq 0$	2 ;	0 ;
$\begin{pmatrix} H_1 & \cdot \\ \cdot & \cdot \end{pmatrix}$ $\left\lvert \begin{pmatrix} \cdot & \cdot \\ \cdot & \cdot \end{pmatrix} \right\rvert$					
Hesse – Determinanten	informativ			informativ	

IQ MATH –Dietz –