Strong Subdifferential Results

$f(\mathbf{x})$	$\partial f(\mathbf{x})$	assumptions
$\lVert\mathbf{x}\rVert$	$B_{\lVert\cdot\rVert_*}[\mathbf{0},1]$	$\mathbf{x}=\mathbf{0}$
$\lVert\mathbf{x}\rVert_1$	$\left\{\sum_{i\in I_{\neq}(\mathbf{x})}\operatorname{sgn}(x_i)\mathbf{e}_i+\sum_{i\in I_0(\mathbf{x})}[-\mathbf{e}_i,\mathbf{e}_i]\right\}$	$\mathbb{E}=\mathbb{R}^n$, $I_{\neq}(\mathbf{x})=\{i: x_i\neq 0\}$, $I_0(\mathbf{x})=\{i: x_i=0\}$.
$\lVert\mathbf{x}\rVert_2$	$\begin{cases}\left\{\frac{\mathbf{x}}{\lVert\mathbf{x}\rVert_2}\right\}, & \mathbf{x}\neq\mathbf{0},\\ B_{\lVert\cdot\rVert_2}[\mathbf{0},1], & \mathbf{x}=\mathbf{0}.\end{cases}$	$\mathbb{E}=\mathbb{R}^n$
$\lVert\mathbf{x}\rVert_\infty$	$\left\{\sum_{i\in I(\mathbf{x})}\lambda_i\operatorname{sgn}(x_i)\mathbf{e}_i : \begin{array}{l}\sum_{i\in I(\mathbf{x})}\lambda_i=1\\ \lambda_i\geq 0\end{array}\right\}$	$\mathbb{E}=\mathbb{R}^n$, $I(\mathbf{x})=\{i: \lVert\mathbf{x}\rVert_\infty=\lvert x_i\rvert\}$, $\mathbf{x}\neq\mathbf{0}$
$\max(\mathbf{x})$	$\left\{\sum_{i\in I(\mathbf{x})}\lambda_i\mathbf{e}_i : \sum_{i\in I(\mathbf{x})}\lambda_i=1,\lambda_i\geq 0\right\}$	$\mathbb{E}=\mathbb{R}^n$, $I(\mathbf{x})=\{i: \max(\mathbf{x})=x_i\}$
$\max(\mathbf{x})$	Δ_n	$\mathbb{E}=\mathbb{R}^n$, $\mathbf{x}=\alpha\mathbf{e}$ for some $\alpha\in\mathbb{R}$
$\delta_S(\mathbf{x})$	$N_S(\mathbf{x})$	$\emptyset\neq S\subseteq\mathbb{E}$
$\delta_{B[\mathbf{0},1]}(\mathbf{x})$	$\begin{cases}\{\mathbf{y}\in\mathbb{E}^*: \lVert\mathbf{y}\rVert_*\leq\langle\mathbf{y},\mathbf{x}\rangle\}, & \lVert\mathbf{x}\rVert\leq 1,\\ \emptyset, & \lVert\mathbf{x}\rVert>1.\end{cases}$	
$\lVert\mathbf{A}\mathbf{x}+\mathbf{b}\rVert_1$	$\sum_{i\in I_{\neq}(\mathbf{x})}\operatorname{sgn}(\mathbf{a}_i^T\mathbf{x}+b_i)\mathbf{a}_i+\sum_{i\in I_0(\mathbf{x})}[-\mathbf{a}_i,\mathbf{a}_i]$	$\mathbb{E}=\mathbb{R}^n$, $\mathbf{A}\in\mathbb{R}^{m\times n}$, $\mathbf{b}\in\mathbb{R}^m$, $I_{\neq}(\mathbf{x})=\{i: \mathbf{a}_i^T\mathbf{x}+b_i\neq 0\}$, $I_0(\mathbf{x})=\{i: \mathbf{a}_i^T\mathbf{x}+b_i=0\}$
$\lVert\mathbf{A}\mathbf{x}+\mathbf{b}\rVert_2$	$\begin{cases}\frac{\mathbf{A}^T(\mathbf{A}\mathbf{x}+\mathbf{b})}{\lVert\mathbf{A}\mathbf{x}+\mathbf{b}\rVert_2}, & \mathbf{A}\mathbf{x}+\mathbf{b}\neq\mathbf{0},\\ \mathbf{A}^T B_{\lVert\cdot\rVert_2}[\mathbf{0},1], & \mathbf{A}\mathbf{x}+\mathbf{b}=\mathbf{0}.\end{cases}$	$\mathbb{E}=\mathbb{R}^n$, $\mathbf{A}\in\mathbb{R}^{m\times n}$, $\mathbf{b}\in\mathbb{R}^m$
$\lVert\mathbf{A}\mathbf{x}+\mathbf{b}\rVert_\infty$	$\left\{\sum_{i\in I_{\mathbf{x}}}\lambda_i\operatorname{sgn}(\mathbf{a}_i^T\mathbf{x}+b_i)\mathbf{a}_i : \begin{array}{l}\sum_{i\in I_{\mathbf{x}}}\lambda_i=1\\ \lambda_i\geq 0\end{array}\right\}$	$\mathbb{E}=\mathbb{R}^n$, $\mathbf{A}\in\mathbb{R}^{m\times n}$, $\mathbf{b}\in\mathbb{R}^m$, $I_{\mathbf{x}}=\{i: \lVert\mathbf{A}\mathbf{x}+\mathbf{b}\rVert_\infty=\lvert\mathbf{a}_i^T\mathbf{x}+b_i\rvert\}$, $\mathbf{A}\mathbf{x}+\mathbf{b}\neq\mathbf{0}$
$\lVert\mathbf{A}\mathbf{x}+\mathbf{b}\rVert_\infty$	$\mathbf{A}^T B_{\lVert\cdot\rVert_1}[\mathbf{0},1]$	same as above but with $\mathbf{A}\mathbf{x}+\mathbf{b}=\mathbf{0}$
$\max_i\{\mathbf{a}_i^T\mathbf{x}+\mathbf{b}\}$	$\left\{\sum_{i\in I(\mathbf{x})}\lambda_i\mathbf{a}_i : \sum_{i\in I(\mathbf{x})}\lambda_i=1,\lambda_i\geq 0\right\}$	$\mathbb{E}=\mathbb{R}^n$,$\mathbf{a}_i\in\mathbb{R}^n$, $b_i\in\mathbb{R}$, $I(\mathbf{x})=\{i: f(\mathbf{x})=\mathbf{a}_i^T\mathbf{x}+b_i\}$
$\frac{1}{2}d_C(\mathbf{x})^2$	$\{\mathbf{x}-P_C(\mathbf{x})\}$	C - nonempty closed and convex, $\mathbb{E}$ - Euclidean
$d_C(\mathbf{x})$	$\begin{cases}\left\{\frac{\mathbf{x}-P_C(\mathbf{x})}{d_C(\mathbf{x})}\right\}, & \mathbf{x}\notin C,\\ N_C(\mathbf{x})\cap B[\mathbf{0},1] & \mathbf{x}\in C.\end{cases}$	C - nonempty closed and convex, $\mathbb{E}$ - Euclidean