$K : B \to \mathbb{R}$ convex

① $K((1-\lambda)u+\lambda v) \le (1-\lambda)K(u)+\lambda K(v) \quad \lambda \in [0,1]$

$$dK(u)[h] = \lim_{t \to 0} t^{-1}(K(u+th)-K(u))$$

$$= \langle \nabla K(u), h \rangle_{{}^*B,B}$$

② $K(v)-K(u) \ge \langle \nabla K(u), v-u \rangle_{{}^*BB}$

③ $\langle \nabla K(v)-\nabla K(u), v-u \rangle_{{}^*BB} \ge 0$

$$d^2K(u)[h,k] = \langle \mathrm{Hess}\, K(u)h, k \rangle_{BB}$$

④ $\langle \mathrm{Hess}\, K(u)h, h \rangle_{BB} \ge 0$