

Extra Tutorial Questions (class 2)

1. Given a twice differentiable function $f : \mathbb{R} \rightarrow \mathbb{R}$, let $A = \sup |f|$, $B = \sup |f''|$. Show that

$$\sup |f'| \leq 2\sqrt{AB}.$$

2. Show that any convex function is continuous on interior of domain.