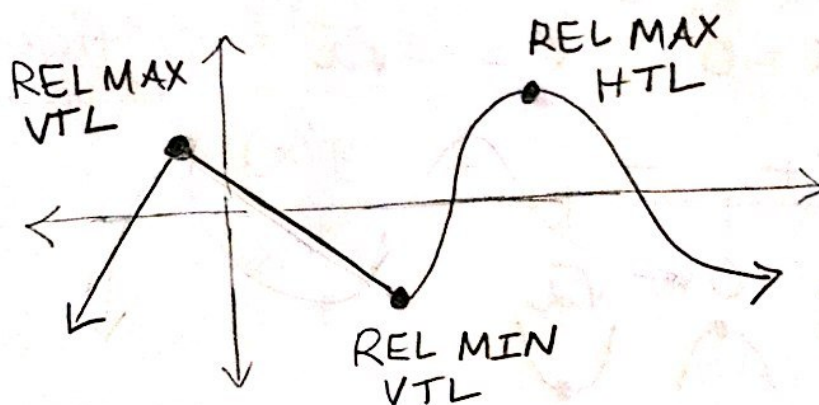These may occur at hills or valleys.

Smooth → horizontal tangent (deriv = 0)

Sharp → vertical tangent
(not differentiable at that point)



REL MAX VTL

REL MAX HTL

REL MIN VTL

✳ **Critical Numbers:**
Let $f$ be defined at $c$.
If $f'(c) = 0$ or $f'(c)$ is undefined at $c$, then $c$ is a critical number.

☆ Relative extrema only occur at critical numbers (slope = 0 or undefined)