

## IMP POINTS

- If  $f'(x) \geq 0$ ,  $f(x)$  is increasing ( $\uparrow$ ) fxn.
- If  $f'(x) \leq 0$ ,  $f(x)$  is decreasing ( $\downarrow$ ) fxn.
- If  $f'(x) > 0$ ,  $f(x)$  is strictly  $\uparrow$  fxn.
- If  $f'(x) < 0$ ,  $f(x)$  is strictly  $\downarrow$  fxn.

### • IVT-

If  $f$  is a continuous function in  $(a, b]$ .

$$f(a) = x, \quad f(b) = y$$

there exist a  $c$ , such that

$$f(c) = z.$$

where,  $z$  can be element of  $(x, y)$ .

