

27/9/2021

CALCULUS AND ITS APPLICATIONS - 20XC11

S VARUN

D21PC35

PROBLEMS - LIMITS

① a) $+: 2$; $-: 1$

b) DNE, LHL \neq RHL

(Does not exist because $LHL \neq RHL$)

c) $+: 3$; $-: 3$

d) Exists, $LHL = RHL$

② $+: 1$, $-: 1$; $f(2) = 2$

b) Exists, $LHL = RHL$

c) $+: 4$; $-: 4$

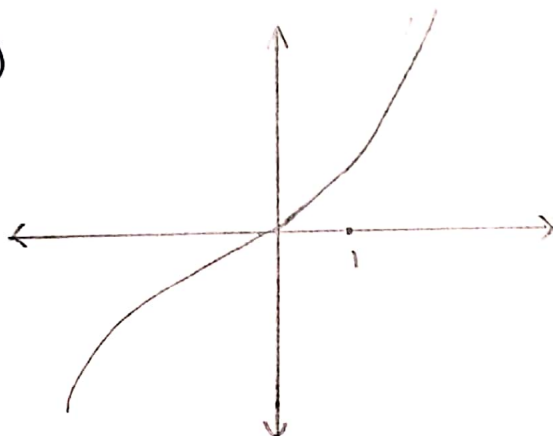
d) Exists, $LHL = RHL$

③ a) Does not exist as $f(x)$ isn't defined between $[0, 1]$

b) Exists, $= 0$.

c) Does not exist as RHL does not exist.

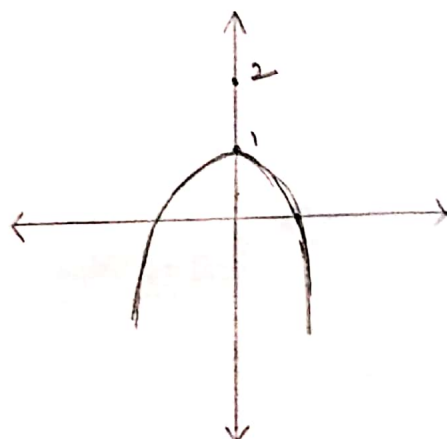
④ a)



b) $1^-: 1$; $1^+: 1$

c) Exists, $LHL = RHL$

⑤ a)

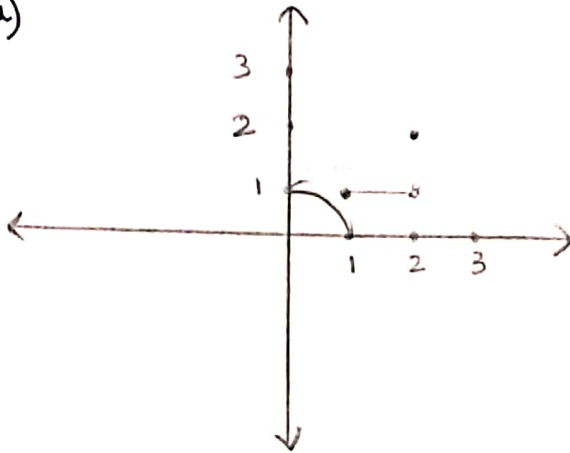


b) $1^-: 0$; $1^+: 0$

c) Exists, $LHL = RHL$

⑥

a)



a) Domain $\in [0, 2]$

b) $[0, 2] - \{1, 2\}$

c) $x = 2$

d) $x = 0$