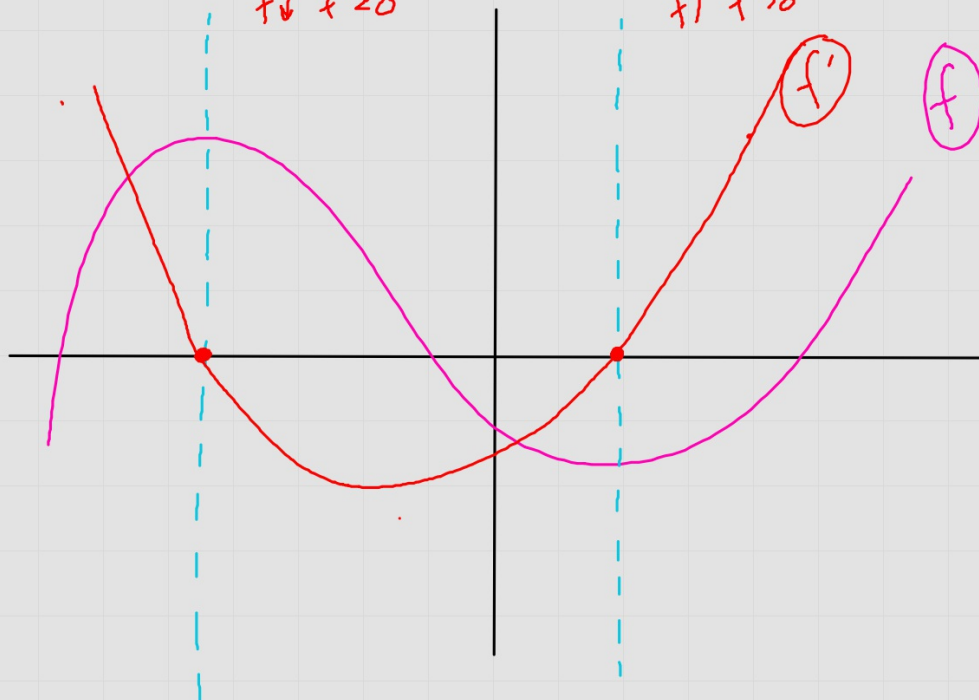


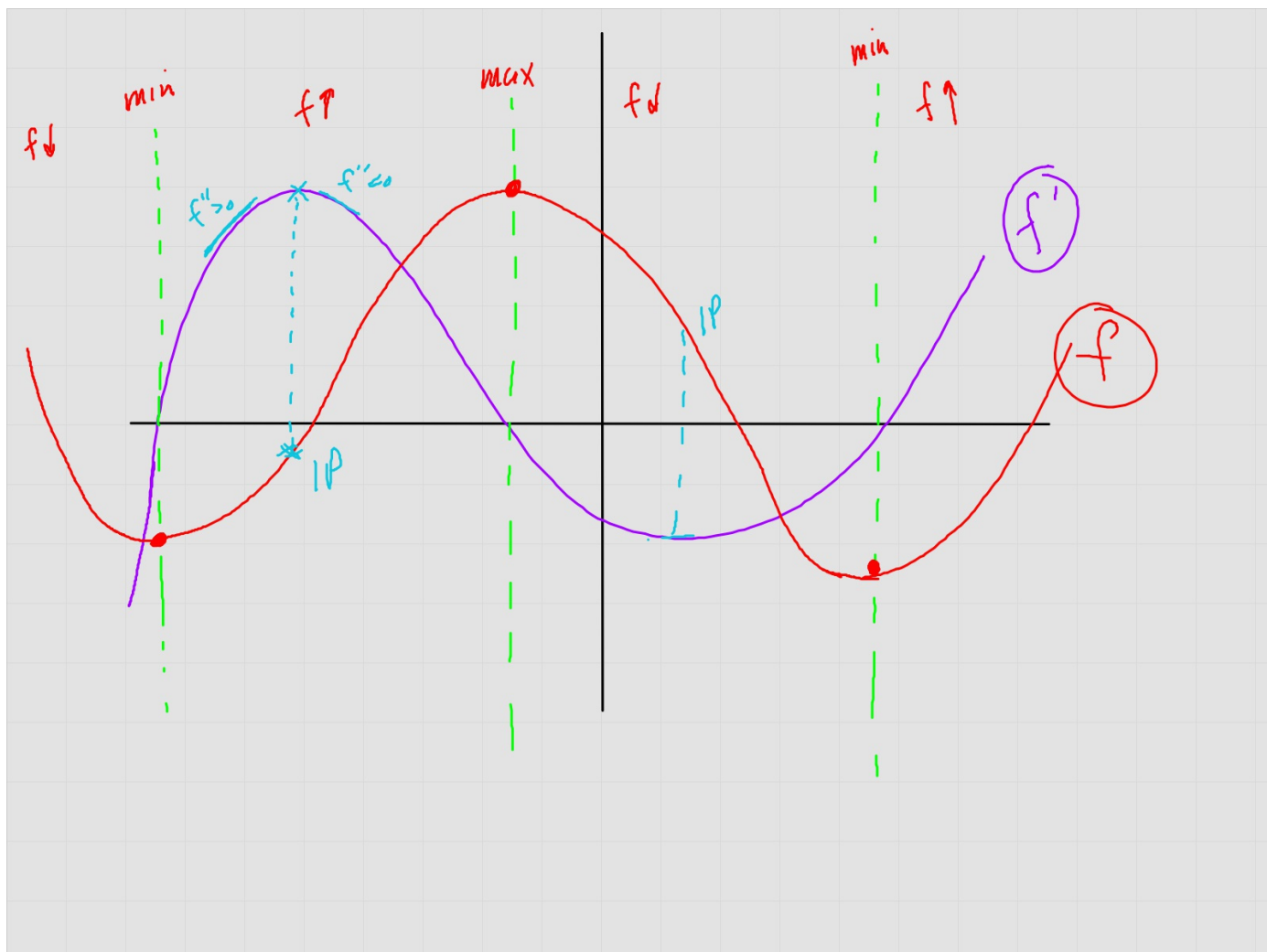
Graphs of f and f'

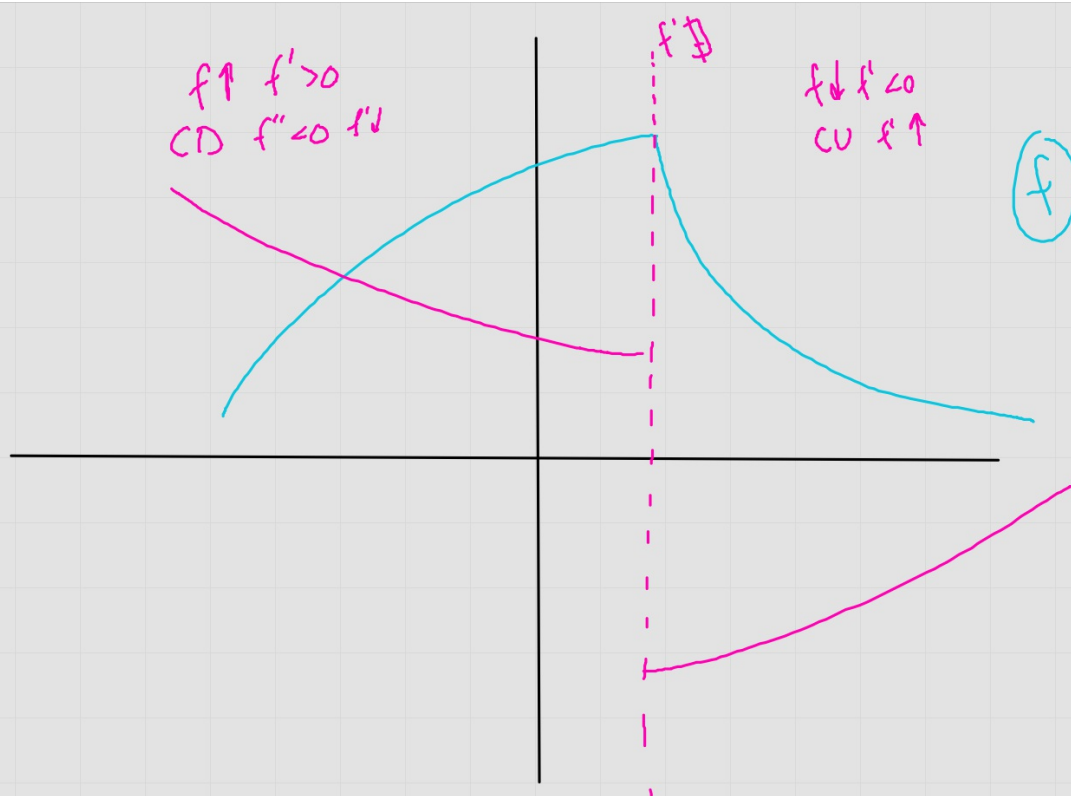
$f \uparrow \quad f' > 0$

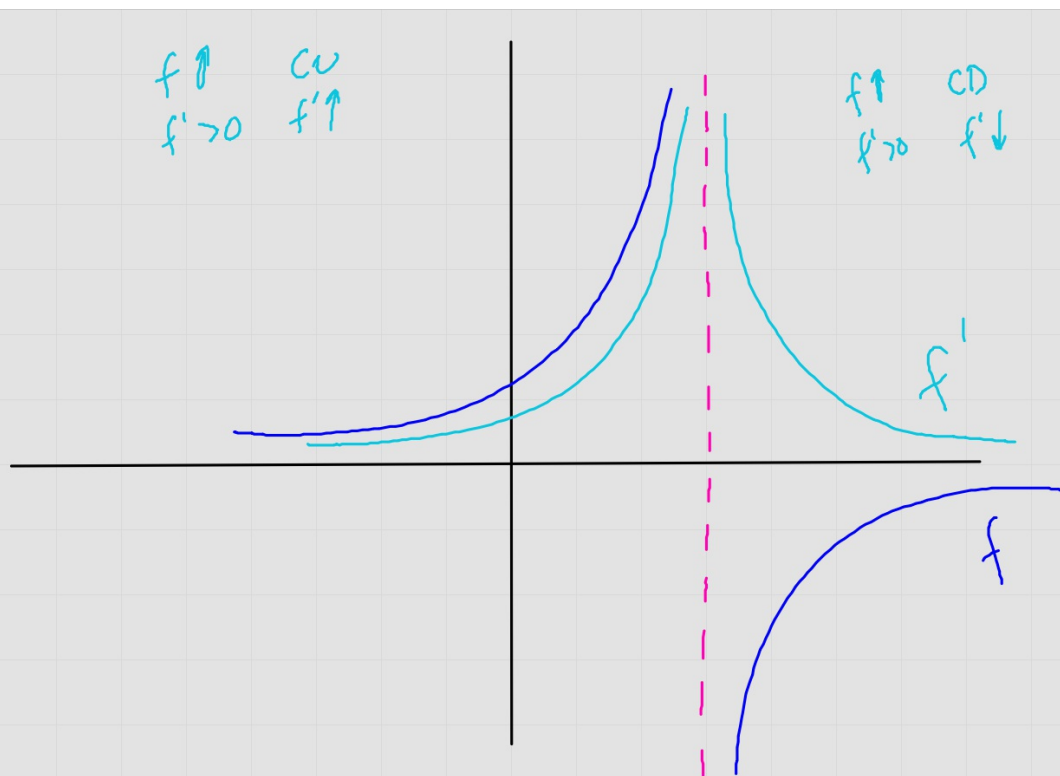
$f \downarrow \quad f' < 0$

$f \uparrow \quad f' > 0$

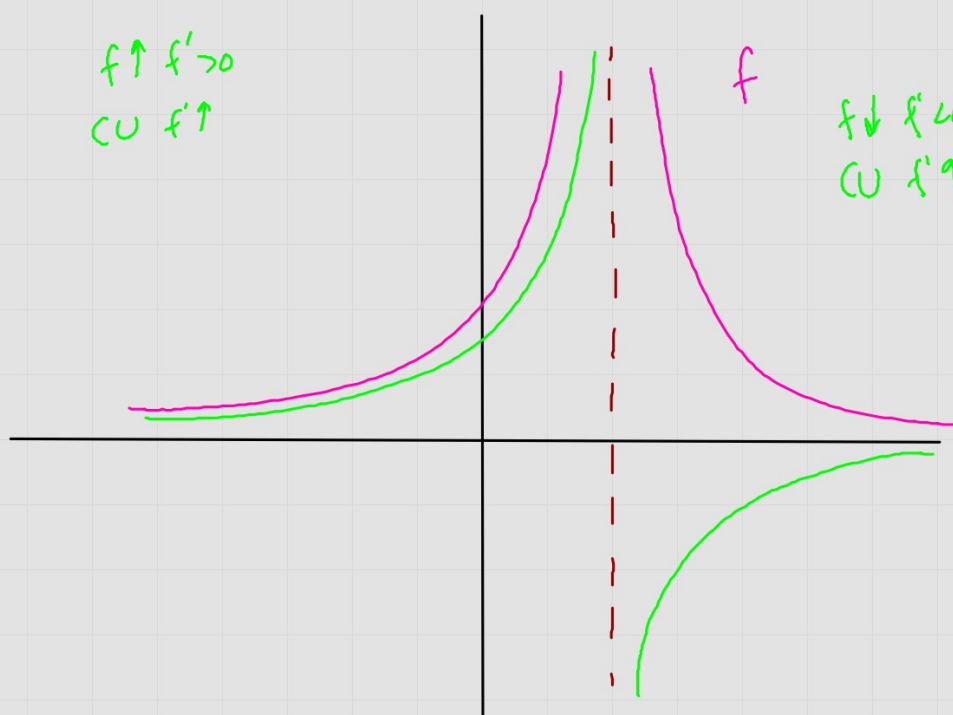








$f \uparrow f' > 0$
 $\cup f' \uparrow$



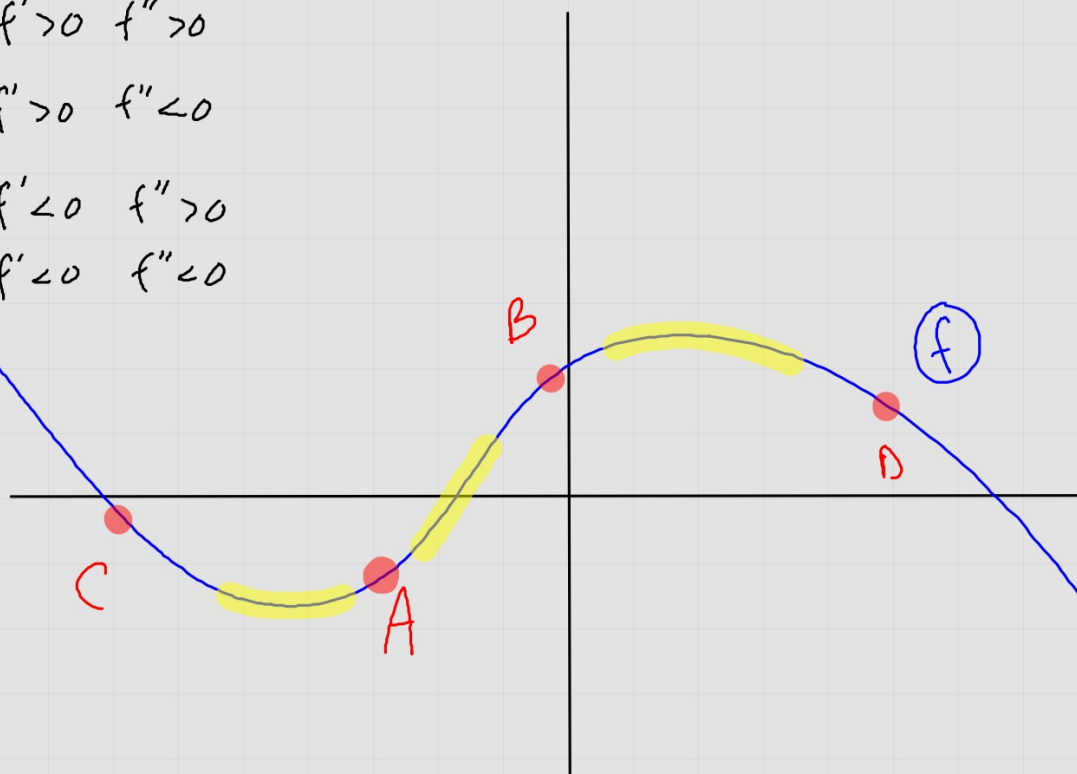
$f \downarrow f' < 0$
 $\cup f' \uparrow$

"A" $f' > 0$ $f'' > 0$

"B" $f' > 0$ $f'' < 0$

"C" $f' < 0$ $f'' > 0$

"D" $f' < 0$ $f'' < 0$



$f_{\text{incr}}: (-\infty, A) \cup (C, E)$

$f_{\text{decr}}: (A, C) \cup (E, \infty)$

$f_{\text{rel max}}: A \neq E$

$f_{\text{rel min}}: C$

$f_{CU}: (B, D)$

$f_{CD}: (-\infty, B) \cup (D, \infty)$

IP: $B \neq D$

f'

