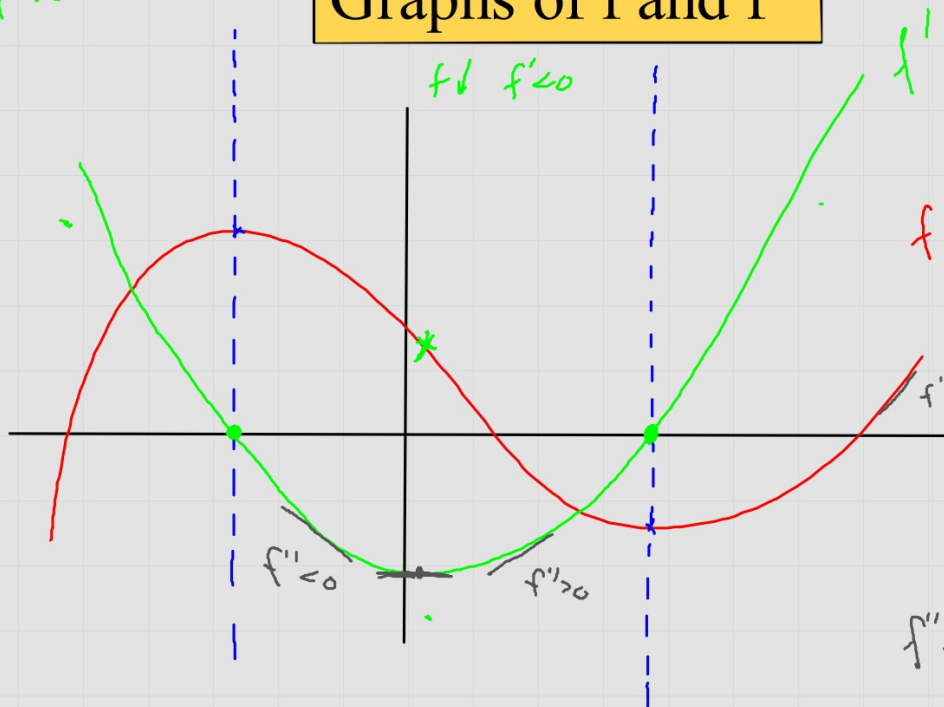


Graphs of f and f'

$f \uparrow \quad f' > 0$

$f \downarrow \quad f' < 0$

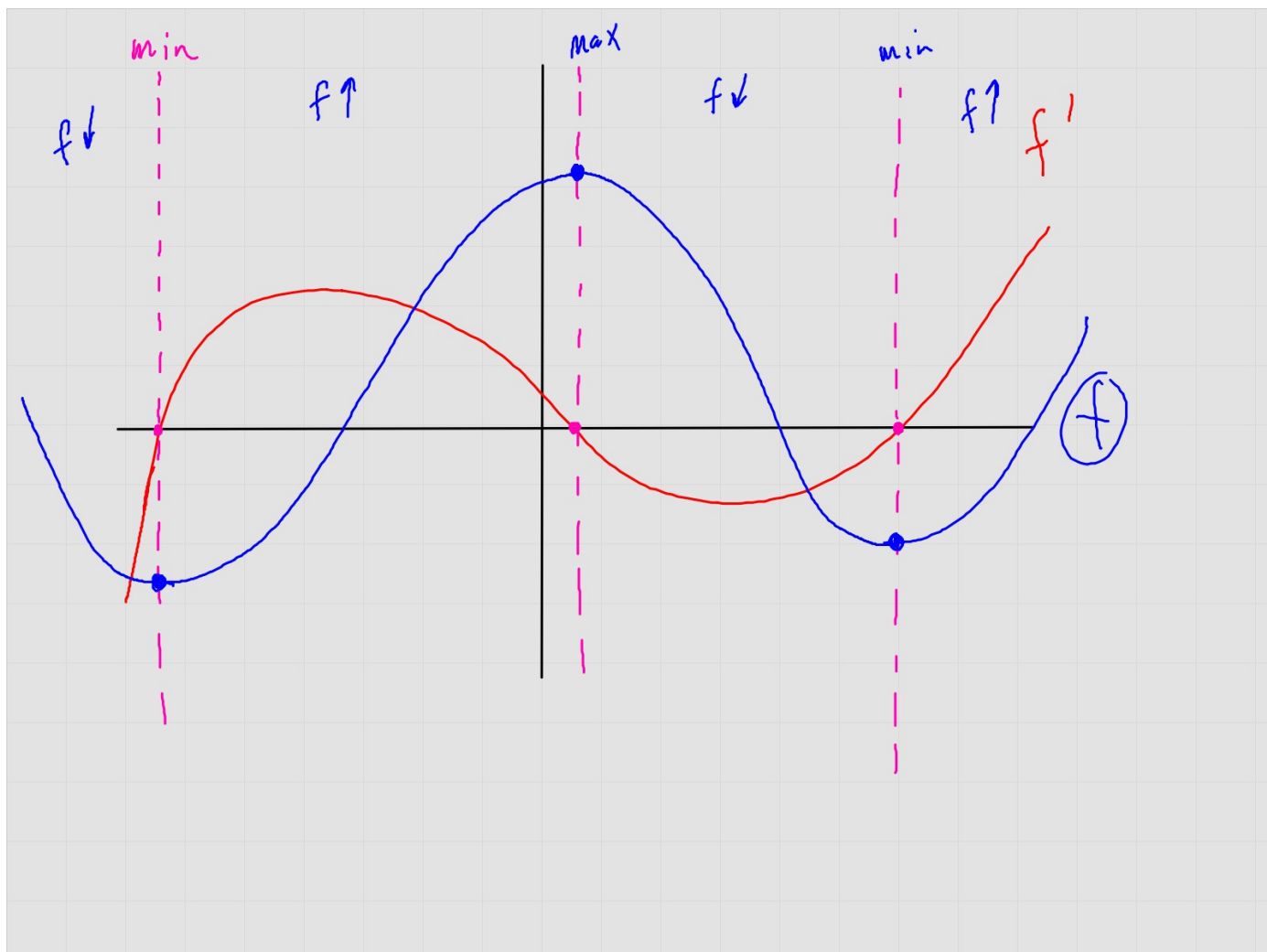


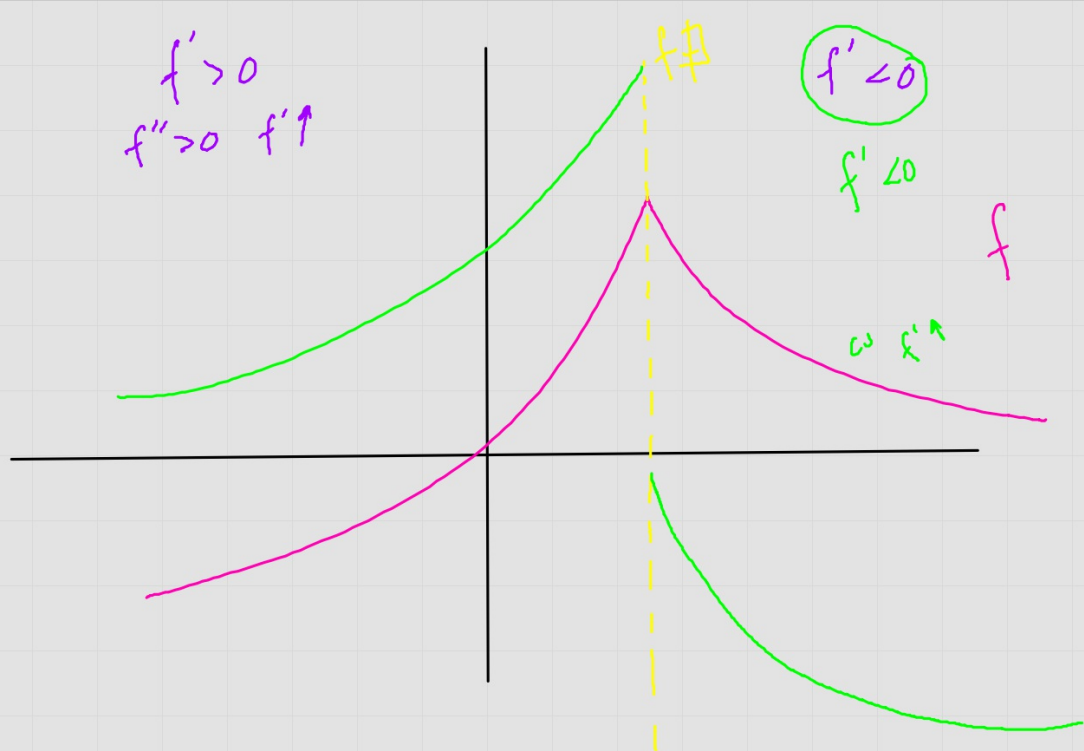
$f'' < 0$

$f'' > 0$

$f'' < 0 \quad f'' > 0$

$f'' = 0$



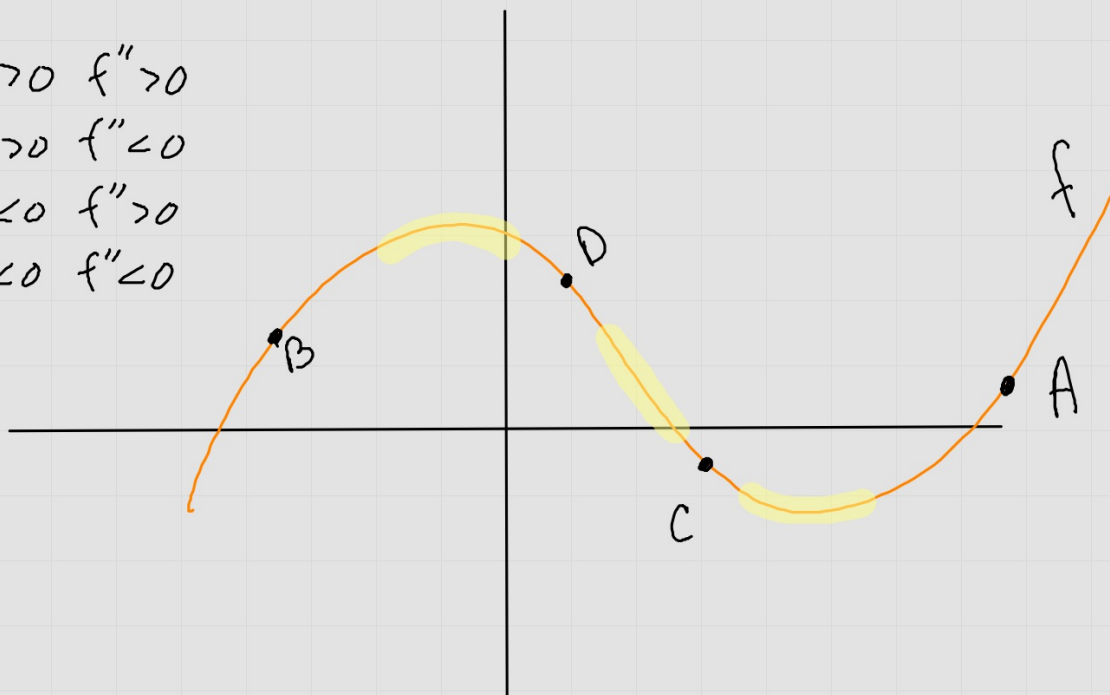


"A" $f' > 0$ $f'' > 0$

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

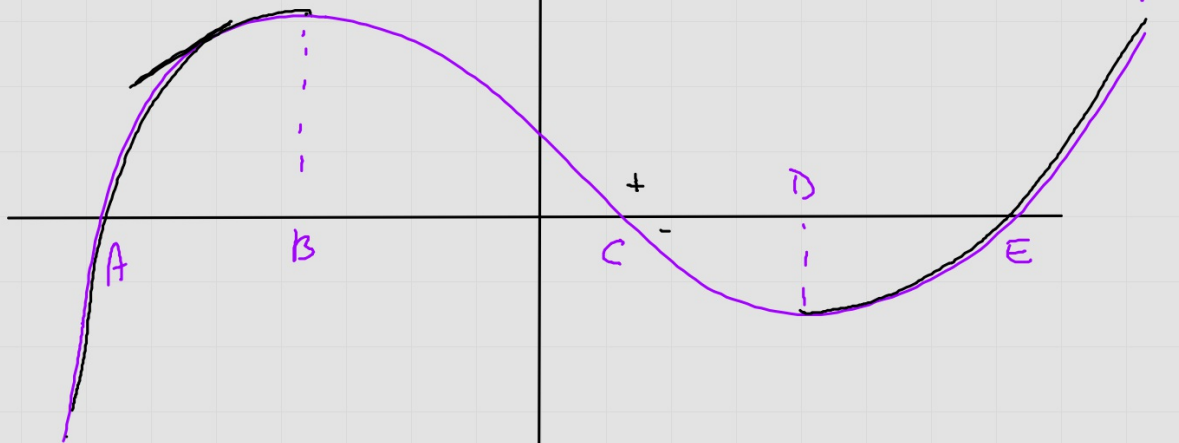
"C" $f' < 0$ $f'' > 0$

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



Rel max: C
Rel min: A, E

f is $CU: (-\infty, B) \cup (D, \infty)$
 f is $CD: (B, D)$
IP: B, D



f incr: $(A, C) \cup (E, \infty)$
 f decr: $(-\infty, A) \cup (C, E)$