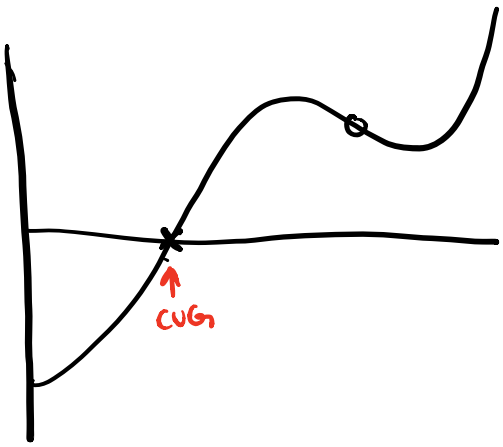
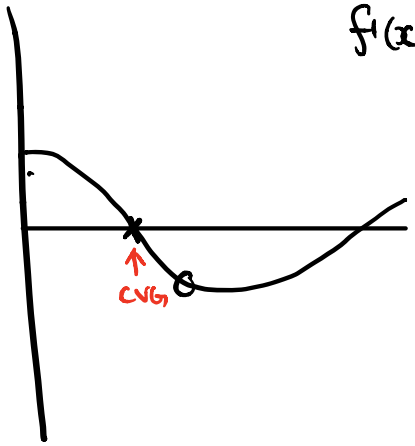
PROBLEM #1.

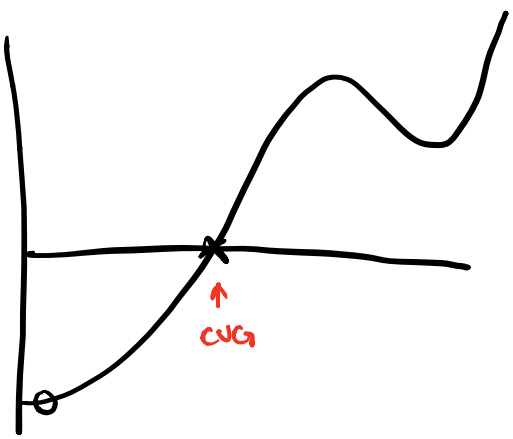
Which functions converge to the "x" from the starting point "o".

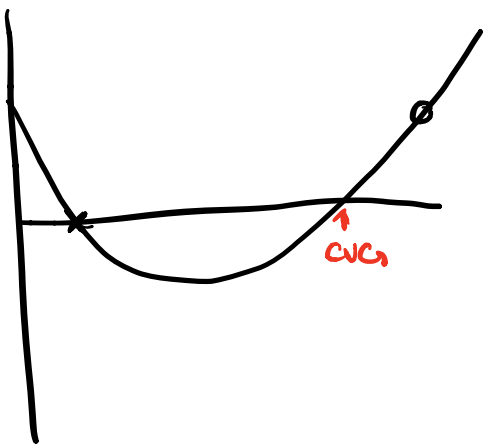
Newton-Raphson

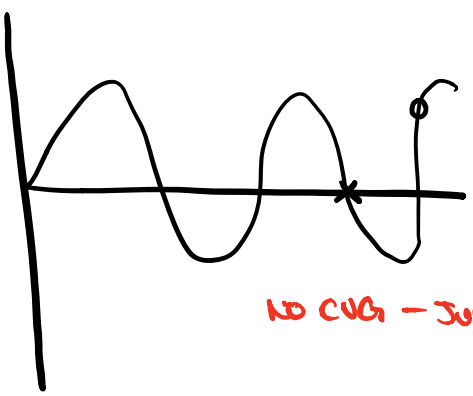
$$x_{i+1} = x_i - \frac{f(x_i)}{f'(x_i)}$$

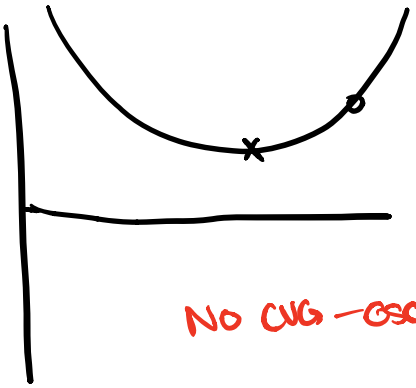




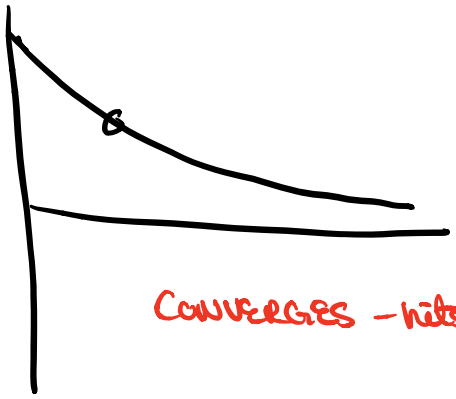




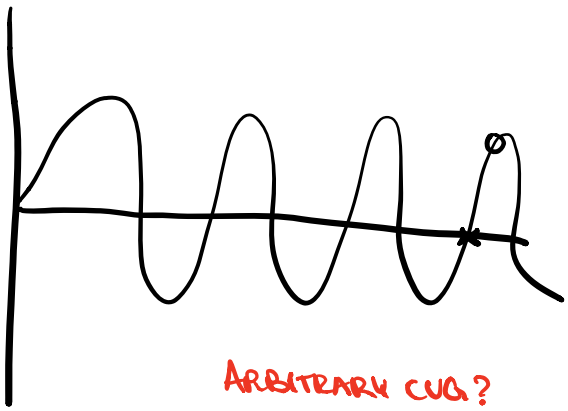




NO CVG – OSCILLATES.



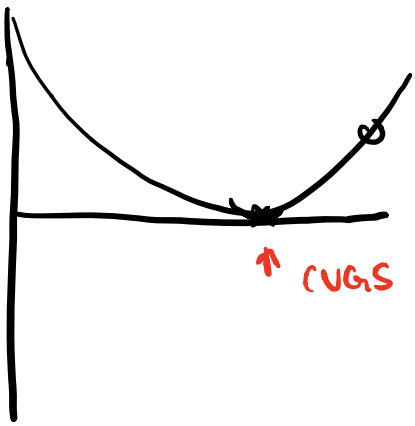
CONVERGES – hits limit



ARBITRARY CVG?

DING PONGS AROUND THE UNIT CIRCLE

w- DECREASING/INC FROM INFINITY/-INF.



↑ CVGS