Math 224 Quiz/HW 5 Paper assignment

Due Monday. Work must be on paper to hand in. Show all work or no credit awarded.

Sec 2.7 #18

Sec 2.8 #18

Class exercise: For the function $f(x) = 4/(1 + x^2)$:

D_f:

Critical numbers:

Using number line sign analysis, give intervals where f increases and decreases:

Hence, by FDT, identify x where local extremes occur.

Verify local extremes with SDT.

Using number line sign analysis, give intervals where f is concave up and concave down.

Hence, identify x where points of inflection x occur.

Sketch the function accurately. Label the extremes and points of inflection as ordered pairs.

Do the same for Sec 3.5 #29.