Week 04 Examples

Calculate the results of interval analysis for the following assignments:

a. $x = ((2_{[2,2]} * b_{[5,5]})_{[10,10]} + 3_{[3,3]})_{[13,13].}$ # with b=[5,5]. => b=[13,13]
b. $x = ((2_{[2,2]} * b_{[5,10]})_{[10,20]} + 3_{[3,3]})_{[13,23]}$ # with b=[5,10]
c. $x = ((2 * b_{[5,10]})_{[10,20]} + c_{[-1,3]})_{[9,23]}$ # with b=[5,10] c=[-1,3]
d. $x = ((a * b)_{[5,30]} + c_{[-1,3]})_{[4,33]}$ # with a=[1,3] b=[5,10] c=[-1,3]
e. $x = ((a * b)_{[-12,+8]} + c_{[-1,3]})_{[-13,11]}$ # with a=[-2,3] b=[-4,2] c=[-1,3]
f. $x = (a\%b)_{[-9,9] \text{ or } [0,9]}$ # with a=[-2,13] b=[10,10]

Note for question e: a*b has end-point values:

- {+8, -4, -12, +6} So we take min and max of these.