Activity 1. [Divide and Conquer by subtraction]

In Subtraction1, a=1,b=1,k=0 so its complexity is O(n). It stops the execution because of a stack overflow when n=16384.

In Subtraction2, a=1,b=1,k=2, so its complexity is O(n3). It stops its execution because of a stack overflow when n=65536.

In Substraction3, a=2,b=2,k=0 so its complexity is O(2n/2). To calculate how many years it would take to execute n=80:

n1=30 🡪 t1=1,872 s

n2=80 🡪 t2=?

t2=(2n2/2/2n1/2)\*t1=2(n2-n1)/2\*t1=225\*1,872 = 62813896.704 s = 1991,82 years

Activity 2. [TITLE OF THE ACTIVITY]

[ANSWER].

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