Description:

Given two natural numbers: A and B. A > B.

What is the probability of Bn > An if we multiply A and B by a different power of 10.

Formula for the probability

A = bigger number

B = smaller number

n = Upper limit of the Power of 10n to multiply each of both numbers

j = Log(A/B)

k = ⌊j⌋ floor number of j (round down of j)

n-k = substraction of n minus k (if negative assign zero)

alfa = ⌊k/j⌋

beta=Boolean value: if n/j is greater than 1 then 1 else zero

Additional documents:

* Zero test.xlsx : First test to see the values
* Zero.py: Returns the probability given the values A, B and the number of zeros (n)
* Zero2.py Test all numbers from 0 to A, B and n and returns the number of good and bad cases and the resulting error if the formula doesn´t apply
* Zero2.1.py better version of zero2.py
* Zero3.py Given A, B and n. It test a random sample (sample to be defined by user) to see the good and correct cases (Lean version of zero2.py)