Understanding The Beatty Sequence for "pi" + Ising Models -> We are investigating Novel Algorithms w.r.t COVID-19 Bio-informatics R&D - Sequencing RNA/DNA based Informatics Frameworks -> A Simple Suggestion from : Dr.Nirmal - antE Inst UTD Dallas TX USA. { email id : hmfg2014@gmail.com }

*We are on git-hub ::-> **https://github.com/tejdnk-2019-ShortNotes** -> Plenty of examples for your to probe.*

*"Did you know that you can use π to partition the positive integers into two disjoint groups? It's not hard. One group is generated by the integer portions of multiples of π. The FLOOR function gives the integer portion of a positive number, so you can write integer that are generated from π as B n = {floor(n*π)} for n=1,2,3,.... This is called the Beatty sequence for π. The first few numbers in the Beatty sequence for π are 3, 6, 9, 12, 15, 18, 21, 25, 28, 31, 34, 37, 40, 43, 47, 50, 53, ...*

The second group contains all the positive integers that are not in the Beatty sequence: 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 22, 23, 24, 26, ... A remarkable fact is that the second group of integers is also the Beatty sequence for some number! In fact, it is the Beatty sequence for the number π/(π-1).

So, the positive integers are partitioned into two mutually disjoint groups by using the Beatty sequence for π and the complementary Beatty sequence for π/(π-1). These two sequences generate all positive integers,and no integer is in both sequences.

For example, the number 2020 appears only in the Beatty sequence for π whereas 2022 appears in the complementary sequence.

It turns out that the only properties of π that are needed for this result is the fact that π is irrational and π > 1, a result that is known as Beatty's Theorem. This article uses SAS to illustrate the Beatty sequence for π and its complementary sequence."

The Beatty sequence -> https://blogs.sas.com/content/iml/2022/03/09/beatty-sequence-pi.html

[THE END]