--1

--2

--3

Comparing 1 and 3:

Making it into quadratic equation:

Finding out the x(or alpha and beta) w/ quadratic formula:

Creating new bn

Changing the shape of 2nd above:

Therefore, the sequence is geometric sequence.

Now, making using , since ,

Writing two equations using those:

Subtracting them:

And using alpha and beta above, we get: