NPTEL

NPTEL ONLINE CERTIFICATION COURSE

Discrete Mathematics
Graph Theory – 3 &
Generating Functions

Binomial expansion - A generating function

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That's a whole lot of abstract thinking and notational talking, please bear with us we will give you more examples and try to illustrate what's happening here, you will soon be able to appreciate the power of generating functions when it comes to counting.

Well you just now saw the generating function for 1 square, 2 square, 3 square, 4 square and so on, you can indeed see the generating function for 1 cube, 2 cube, 3 cube too, right you can think of it.

Now what do you think is the generating function for this? N choose 0 + N choose 0, N choose 1, N choose 2 and so on, what do you think is a function that generates this, up to N choose N and then I'll say let's say 0, 0, 0, 0, you see what generates this is simply 1 + X whole to the N, do you see why? Think about it.
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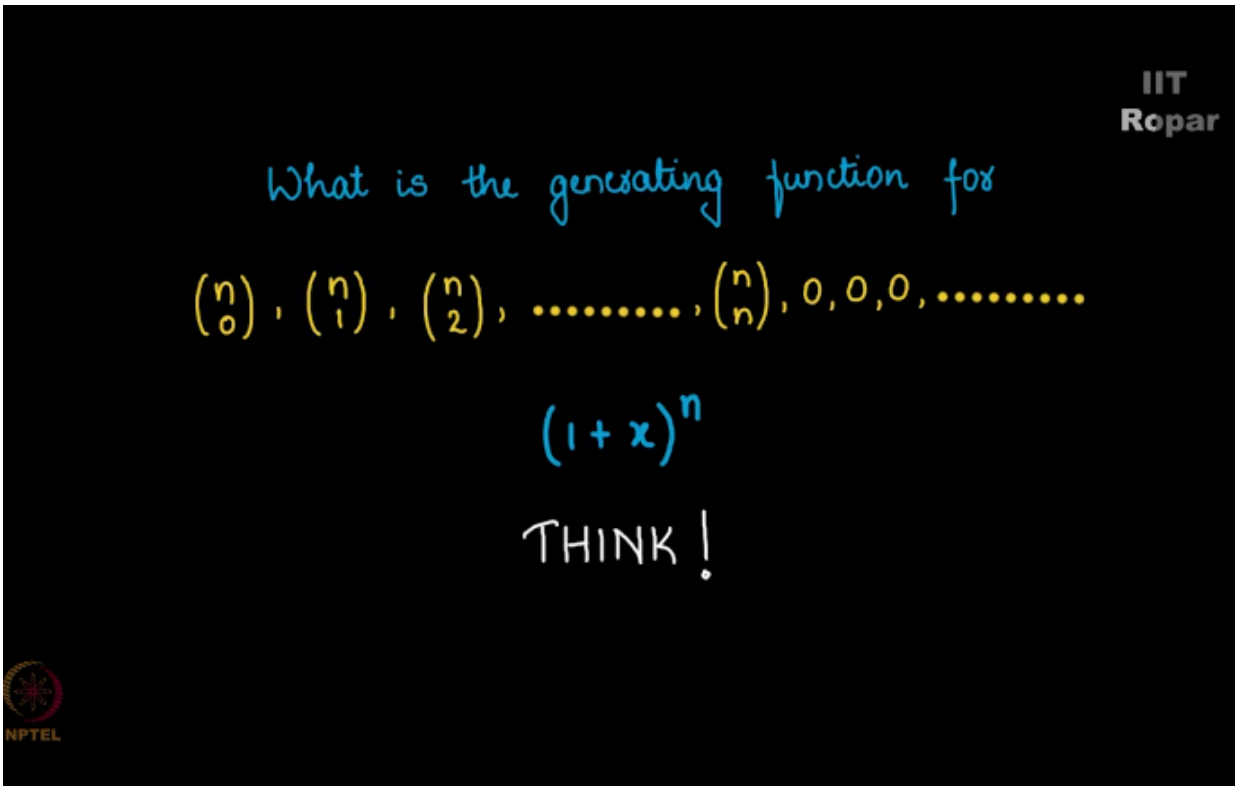

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