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NPTEL ONLINE CERTIFICATION COURSE

Discrete Mathematics
Set Theory

De Morgan's Laws – Part 1

With
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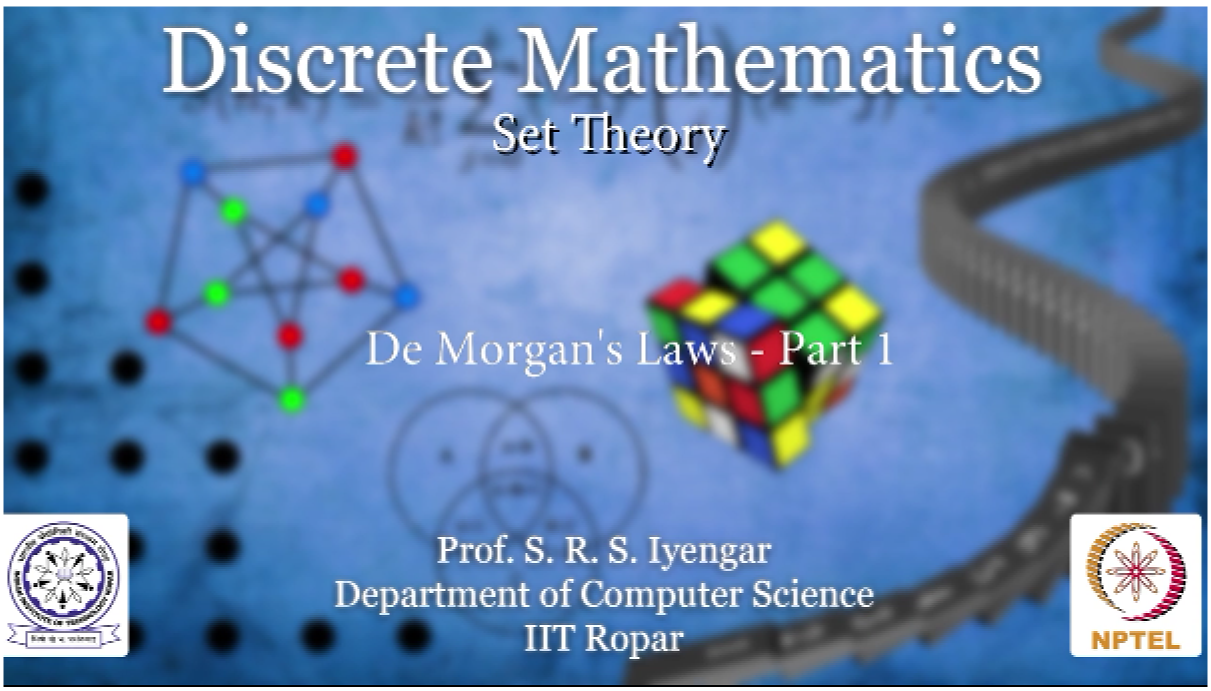
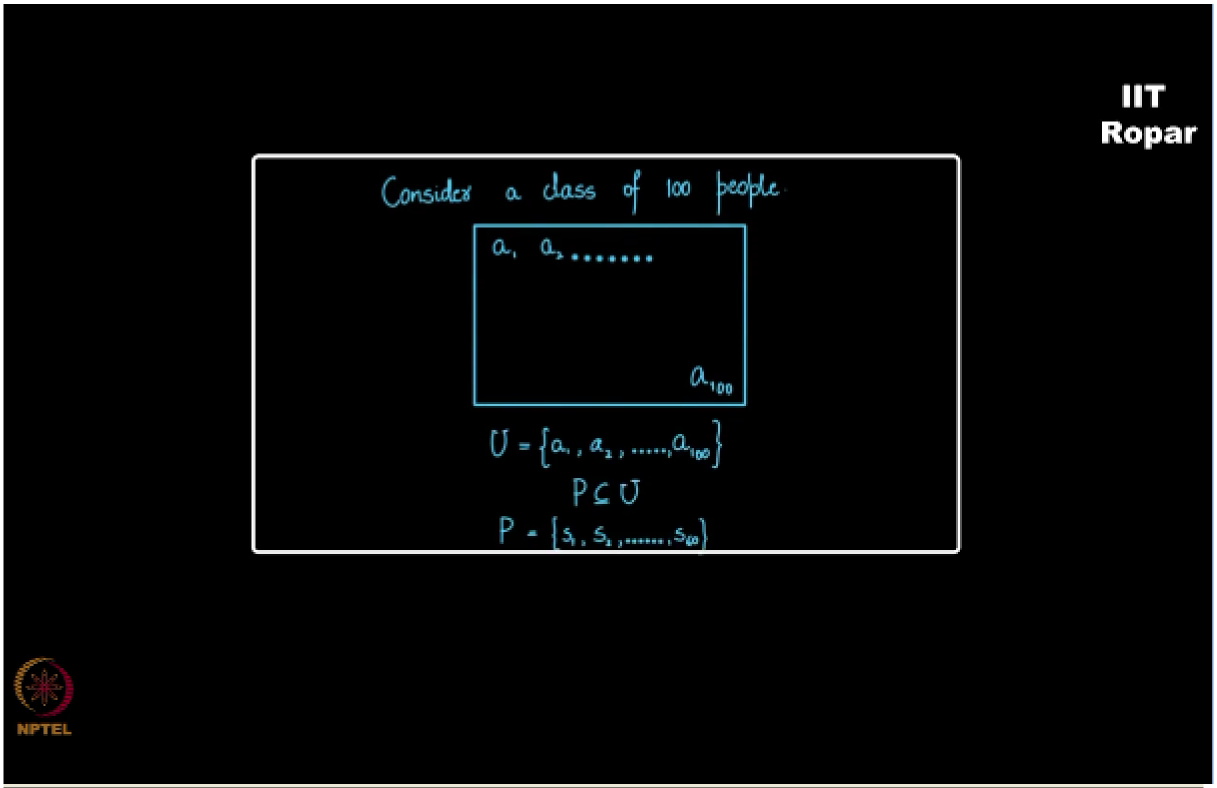
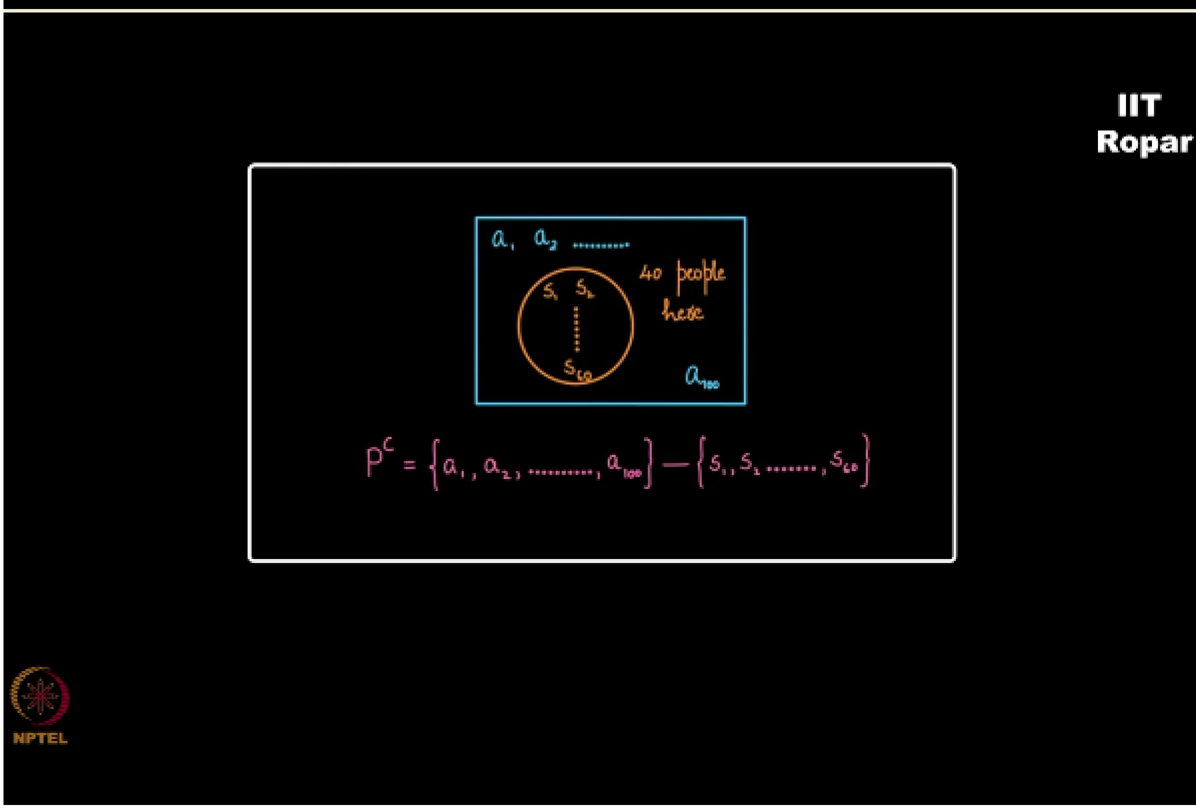


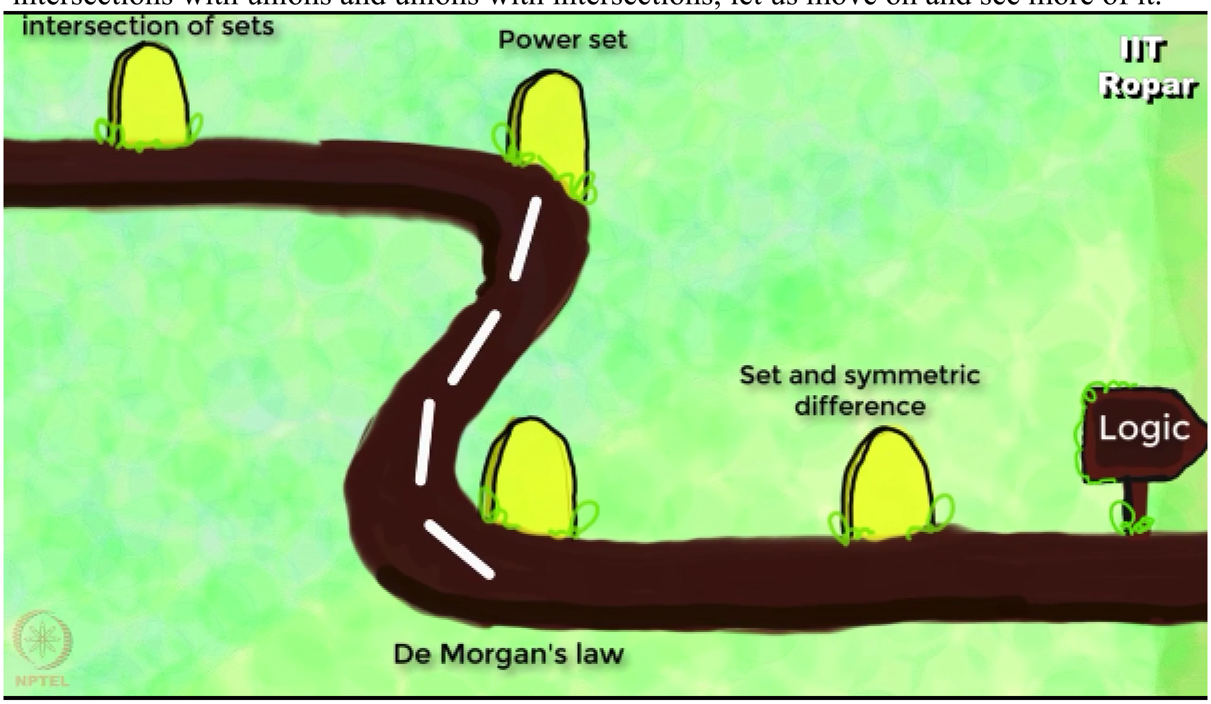
Compliment of a set seems to be a straightforward concept, yes it is and a celebrated law called





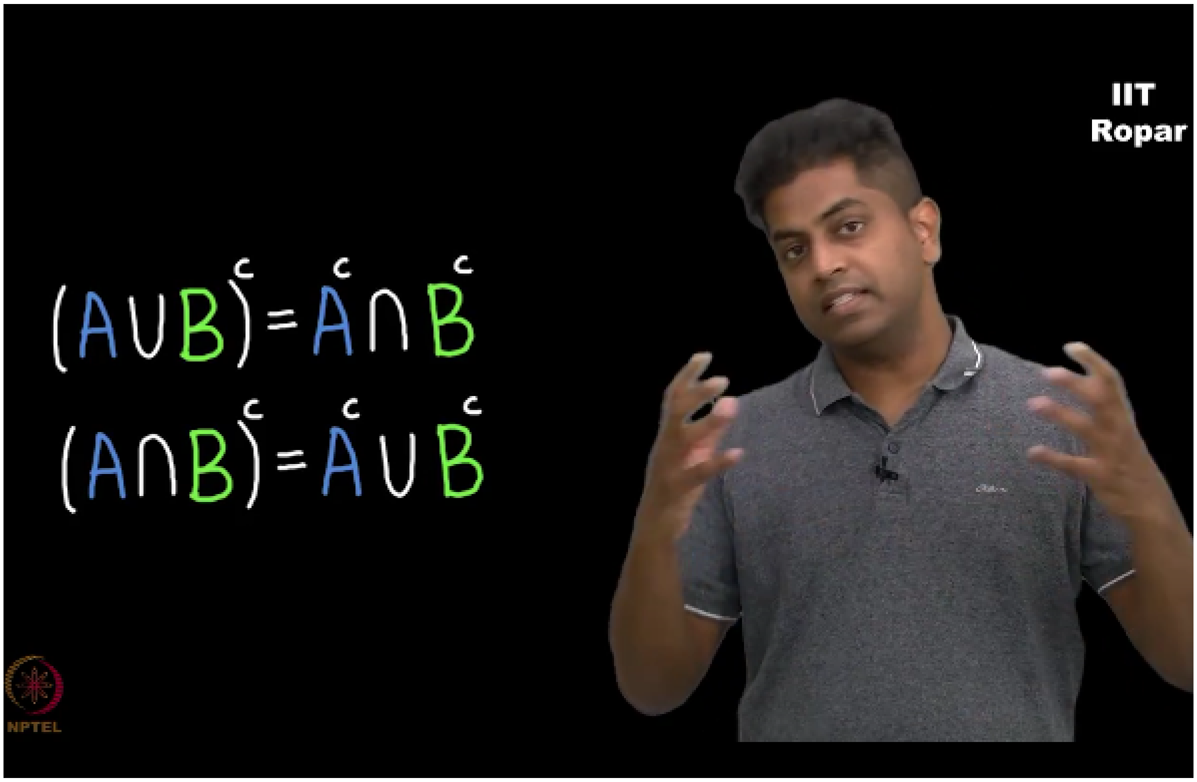
the De Morgan's law is an immediate consequence of this concept. Compliments can swap

intersections with unions and unions with intersections, let us move on and see more of it.



This is one result that appears to be very unclear when you see it in the beginning but it is pretty obvious it is called the De Morgan's law it goes like this, the set A union B, take its complement is actually equal to A complement, B complement, their intersection.

Similarly A intersection B complement is A complement union B complement, let us see how this is true.



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