



NPTEL

NPTEL ONLINE COURSE

Discrete Mathematics

Functions

Numbers adding to 9

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Discrete Mathematics

Mathematical Induction and pigeonhole principle

Numbers adding to 9



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If you pick five numbers from the numbers 1 to 8, again 1 and 8 included then two of them will add up to 9. What does it mean? You have been given the numbers 1 to 8, 1 and 8 included. This set 1 to 8. You pick any five numbers from these eight numbers you will end up having two numbers whose sum is nine.

If you pick 5 numbers from the numbers
 $\{1, 2, \dots, 8\}$ with 1 and 8 included then
two of them will add up to 9?



Think about it. Use the Pigeonhole principle to prove that this is true. We will give you the solution in the next video.