IIT Madras

ONLINE DEGREE

Statistics for Data Science – 1
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Week 6 - Tutorial 3

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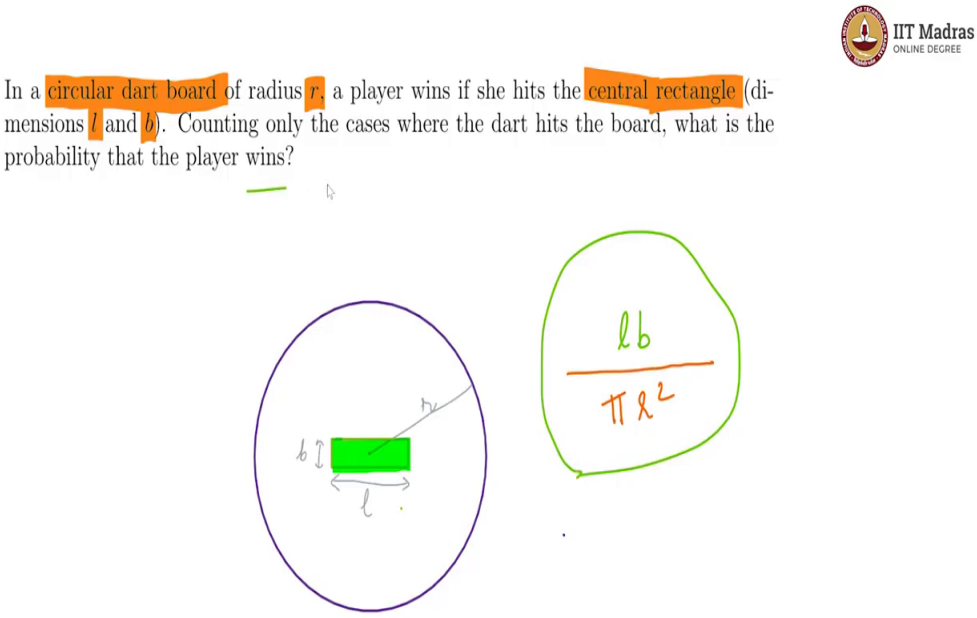

In this question there is a circular dart board radius is r, and a player wins if she hits the central rectangle, so there is a rectangle at the center and the dimensions are l and b. Counting only the cases where the dart hits the board, what is the probability that the player wins? So, a dart board is something like this and the radius is given to be r and then they are saying there is a central rectangle which if the dart hits the player wins.

And this rectangle's dimensions, this is b, the breath is b and the length is l. So, the sample space here is the total circle. So, our denominator will be the area of the total circle which is πr^2 and the specific condition we are looking for is hitting the center which is this area, just the rectangle's area and that comes out to be lb, so this should be the probability of winning.