

M 362K Synopses for 3/24

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March 23, 2015

Cumulative probability distribution can be represented by cumulative distribution functions denoted by $F_X(x)$. Here X denotes the random variable and x denotes the value of the random variable. It is defined as $F_X(x) = Pr[-\infty < X \leq x]$. Therefore $Pr[a < X \leq b] = F_X(b) - F_X(a)$. The probability density function is defined as $f_X(x) = F'_X(x)$ and it has three properties. Note that we can calculate the probability of an interval by using either probability distribution function or the probability density function.