Probability and Statistics - IT2120

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```
> # Binomial Distribution
> n <- 50
> p <- 0.85
> # P(X >= 47)
> prob_at_least_47 <- sum(dbinom(47:50, size = n, prob = p))
> print(paste("P(X >= 47):", prob_at_least_47))
[1] "P(X >= 47): 0.0460465788923018"
> # Using cumulative distribution function
> prob_at_least_47 <- 1 - pbinom(46, size = n, prob = p)
> print(paste("P(X >= 47):", prob_at_least_47))
[1] "P(X >= 47): 0.0460465788923019"
> # Poisson Distribution
> lambda <- 12
> # P(X = 15)
> prob_15_calls <- dpois(15, lambda = lambda)
> print(paste("P(X = 15):", prob_15_calls))
[1] "P(X = 15): 0.0723911201466387"
```