Lec 10/31

Normal approx. to Binomial dist

if $X \sim \text{Binom}(n, p)$

$\mu_x = np$

$\sigma_x = \sqrt{np(1-p)}$

$Y \sim \text{Norm}(np, \sqrt{np(1-p)})$ is a good approximation to X

$P(X = k) \approx P(k - 0.5 < Y < k + 0.5)$

$P(X < k) \approx P(Y < k - 0.5)$

$P(X \leq k) \approx P(Y < k + 0.5)$

Fair game CRVs:

Exp, Norm, Unif

All DRVs