

1 Bernoulli:	$f(x) = \begin{cases} p & x=1 \\ 1-p & x=0 \end{cases}$	$E(x) = p$	$Var(x) = p(1-p)$	$X \sim \text{Bernoulli}(p)$
2 Binom Distrib:	$f(x) = \binom{n}{x} p^x (1-p)^{n-x}$	$E(x) = np$	$Var(x) = np(1-p)$	$X \sim \text{Bino}(n; p)$
3 Poisson Process:	$f(x) = \frac{e^{-\lambda t} (\lambda t)^x}{x!}$	$E(x) = \lambda t$	$Var(x) = \lambda t$	$X \sim \text{Poisson}(\lambda t)$ # periods

- 1 single binary choice
- 2 repeated, indep Bernoulli trials
- 3 Independent, Individual, Homogeneous events @  $\lambda$  per unit of time avg.