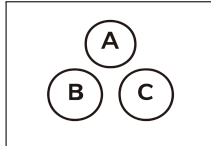


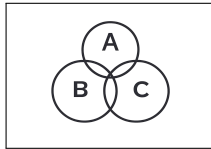
21

Discrete Distribution Poisson Variable

P

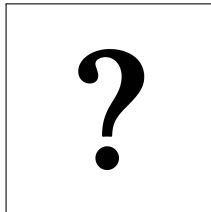


$$\lambda = 1$$



$$P(X = k) = e^{-\lambda} \frac{\lambda^k}{k!}$$

$$P(X = 0) = e^{-1} \frac{1^0}{0!} = e^{-1} \approx \boxed{0.37}$$



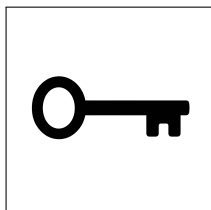
$$n = 1000$$

$$p = 0.001$$

21

Discrete Distribution Poisson Variable

P



$$n = 1000$$
$$p = 0.001$$

$$P(X = 0) = e^{-1} = 0.3679$$