

A107270050 陳嘉君

6. (1) 是, 離散的

$$(2) X \sim B(10, 0.5), P(X \geq 6) = 1 - P(X \leq 5) \\ = 1 - 0.623 = 0.377 \#$$

$$(3) P(X \leq 4) = 0.377 \#$$

34. 
$$P(X=x) = \frac{e^{-\mu} \cdot \mu^x}{x!}, \quad P(X=k) = \sum_{x=0}^k \frac{\mu^x}{x!} e^{-\mu}$$

> 1個月1次

1個月0.5次

$$(1) P(X=0) = \frac{e^{-0.5} \cdot 0.5^0}{0!} = e^{-0.5} = 0.6065 \#$$

$X \sim P_0(0.5)$

$$(2) P(X \geq 1) = 1 - P(X=0) \\ = 1 - e^{-0.5} = 0.3935 \#$$

$$35. (1) P(X=0) = \frac{e^{-3.3} \cdot 3.3^0}{0!} = 0.0498 \#$$

$$(2) P(X=2) = 0.4232 - 0.1991 = 0.2241 \#$$

(累積到2的概率 - 累積到1)

$$39. X \sim N(5, 3.5)^2$$

$$P(X > 8) = P\left(Z > \frac{8-5}{\sqrt{3.5}}\right) = P(Z > 0.86)$$

$$= 1 - 0.8051 = 0.1949 \#$$

