4-6. (1) 是離散的

(2) $P(X \geq 6)$

$X \sim B(10, 0.5)$, $P(X \geq 6)$

$= 1 - P(X \leq 5) = 1 - 0.623 = 0.377$

(3) 求 $P(X \leq 4)$

$P(X \leq 4) = 0.377$

4-34.

(1)

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

$P(X = k) = \sum_{x=0}^{k} \frac{\mu^x}{x!} e^{x}$

2個月 1=入

1個月 0.5=入

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

$= 0.6065$

(2) $(X \geq 1) = 1 - P(X = 0)$

$= 1 - e^{-0.5}$

$= 0.3935$

4-35.

(1) $X \sim P_0(3)$

$P(X = 0) \frac{e^{-3} 3^0}{0!} = 0.0498$

(2)

$P(X = 2) \frac{e^{-3} 3^2}{2!} = 0.4232$

$0.4232 - 0.1991 = 0.2241$ #

$P(X = 2) = P(X \leq 2) - P(X \leq 1)$

4-39.

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

$P(X > 8) = P[Z > \frac{8-5}{3.5}]$

$= P(Z > 0.86) = 1 - 0.8051 = 0.1949$

5-8

(1) $P(X > 15)$

$= P(\frac{X - 13.2}{5.3} > \frac{15 - 13.2}{5.3})$

$= P(Z > 0.34) = 1 - P(Z \leq 0.34)$

$= 1 - 0.6331 = 0.3669$

(2) $(13.2, 5.3^2)$ $\bar{X} \sim N[13.2, \frac{5.3^2}{16}]$

$P(\bar{X} > 15) = P[\frac{\bar{X} - 13.2}{\frac{5.3}{4}} > \frac{15 - 13.2}{\frac{5.3}{4}}] = P(Z > 1.36)$

$= 1 - 0.9131 = 0.0869$ $= 1 - P(Z \leq 1.36)$