Date: / /　　統計學練習　A107270006企管二甲王律翔

e.g $n=10$

x	.05	.10	.20	.30	.40
0	.599	.349	.107	.028	.006
1	.914	.736	.376	.149	.046
2	.988	.930	.678	.383	.167
4	.999	.987	.879	.650	.382
6	1	1	.994	.953	.834

(.62)

Ch4.6、(1) 是，离散的

(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、$P(X=x) = \frac{e^{-k} k^{x}}{x!}$

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

2個月 → 1次

10個月 → 0.5次

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

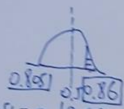
(2) $P(X \geq 1) = 1 - P(X=0) = 1 - e^{-0.5} = 0.3935$

35、令X為10呎寬、300呎長的玻璃氣泡瑕疵個數，則X ~ P(3)

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

(2) $P(X=2) = \frac{e^{-3} 3^{2}}{2!} = 0.224$

39、令X為上網長度，則 $X \sim N(5, 3.5^2)$



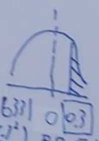
$P(X>8) = P(Z > \frac{8-5}{3.5}) = P(Z > 0.86) = 1 - 0.8051 = 0.1949$

Ch5、8、(1) $P(X>15) = P(\frac{X-11.2}{5.1} > \frac{15-11.2}{5.1})$

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

$= 1 - 0.6331$

$= 0.3669$



(2) 由題意知 $n=16$，設 $\bar{X}$ 表示16場比賽平均得分，因為 $X \sim N(11.2, 5.1^2)$，所以 $\bar{X} \sim N(11.2, \frac{5.1^2}{16})$，即 $\frac{\bar{X}-11.2}{\frac{5.1}{\sqrt{16}}} \sim N(0,1)$

故 $P(\bar{X}>15) = P(\frac{\bar{X}-11.2}{\frac{5.1}{\sqrt{16}}} > \frac{15-11.2}{\frac{5.1}{\sqrt{16}}}) = P(Z > 1.36) = 1 - P(Z \leq 1.36)$

$= 1 - 0.9131$

$= 0.0869$

Double A