B0n290043 吳榮芸

Subject : .....

No. :

Date : ...../...../.....

[1] (.1) $f_X(k) = \frac{1}{10}$

(.2) $E[X] = 10 \times 0.1 = 1$

(.3) $Std[X] = \sqrt{10 \times 0.1 \times 0.9} = \sqrt{0.9} = 0.9487$

(.4) $f_Y(k) = \begin{cases} \frac{C_k^{10}}{C_{10}^{100}}, & 0 \le k \le 10 \\ 0, & \text{otherwise} \end{cases}$

(.5) $E[Y] = 1$

$Std[Y] = 0.9045$

$\therefore E[Y] + Std[Y] = 1.9045$

(.6) $f_Z(z) = \begin{cases} \frac{C_5^n}{C_n^{100}}, & 0 \le n \le 100 \\ 0, & \text{otherwise} \end{cases}$

[2] (.1) $f_W(w) = \begin{cases} \frac{x}{100}, & 0 \le x \le 100 \\ 0, & \text{otherwise} \end{cases}$

(.2) $E[W] = 1$

[3] (.1) $b(5; 100; 0.05)$

(.2) $b(10; 100, 0.05) = 0.9139 - 0.5987 = 0.3152$

reject, the proportion of defective units