

H14問9.

(1) $P(X_A = x_A) = \binom{x}{x_A} \left(\frac{n_A}{n}\right)^{x_A} \left(\frac{n_B}{n}\right)^{x_B}$ //

(2) ii $(\because x_A > x_B)$

(3)
$$Z = \frac{X_A - \frac{n_A}{n}x}{\sqrt{\frac{x}{4}}} \sim N(0,1)$$

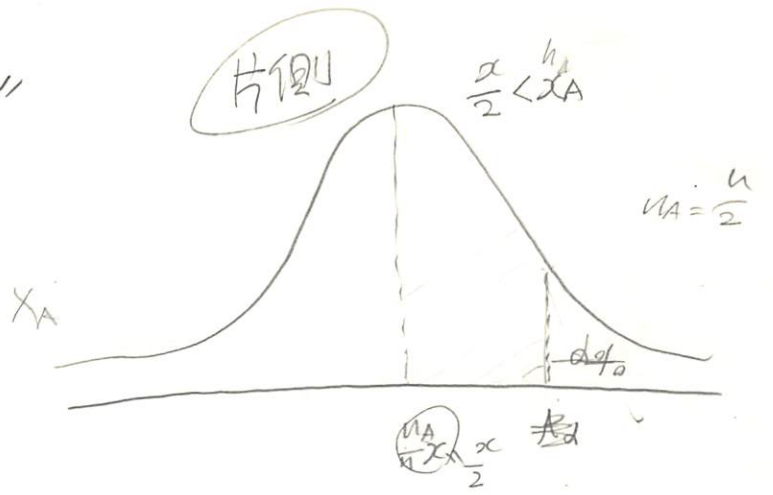
$\alpha = 5\%$

$$P(Z \leq t_\alpha) = 1 - 0.05$$

$$X_A - \frac{x}{2} \leq \frac{\sqrt{x}}{2} t_\alpha$$

$$X_A \leq \frac{x}{2} + \frac{\sqrt{x}}{2} t_\alpha$$

よって、 $X_A > \frac{x}{2} + \frac{\sqrt{x}}{2} t_\alpha$



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