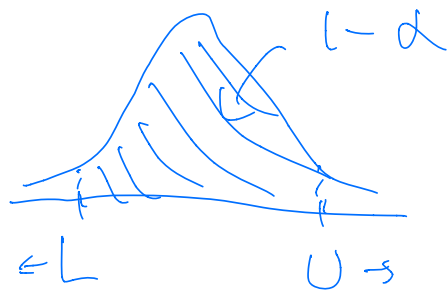


(a) 是. By definition,

$$P(\theta \in [L(X), U(X)]) = 1 - \alpha$$



(b) 否.  $P(\text{type I error}) \leq \alpha$  只与  $\alpha$  有关

sample size  $n$  只会影响 type II error

(c) 是. By conditional prob.,

$$P(B|A) = \frac{P(A \cap B)}{P(A)} > P(B)$$

$$\Rightarrow P(A|B) = \frac{P(A \cap B)}{P(B)} > P(A)$$

(d) 是

$$P(A \text{ or } B) = P(A \cup B) = P(S) = 1$$

↑  
互補

(e) 否,  $p\text{-value} \neq P(\text{type I error})$

(f) 否, 假設檢定結果只有顯著與否,  
門檻由  $\alpha$  控制

(g) 否, 可能有 confounding variables (eg.  $X$ )