Example 3-2.

Q: verify $[G(s)X^*(s)]^* = G^*(s)X^*(s)$? & $Y(z) = ?$

T $\quad G(s) = \frac{1}{s+1} \qquad x(t) = 1(t)$

Solution $G(s)X^*(s) = Y(s)$

$$G^*(s)X^*(s) = G(z)X(z) = Y(z)$$

即 $Y^*(s) = Y(z)\big|_{z=e^{sT}}$ clearly some.

$$G(s) = \frac{1}{s+1} \qquad G(z) = \frac{1}{1-e^{-T}z^{-1}} = \frac{Y(z)}{X(z)}$$

$$x(t) = 1(t) \qquad X(z) = \frac{1}{1-z^{-1}}$$

$$Y(z) = \frac{1}{(1-z^{-1})} \quad \frac{1}{1-e^{-T}z^{-1}}$$

$$Y^*(s) = \frac{1}{1-e^{-sT}} \quad \frac{1}{1-e^{-T}e^{-sT}}$$