

Exercise 1.4.44

Let  $C$  be any nonsingular matrix. Show that  $(C^{-1})^T = (C^T)^{-1}$ .

$$C * C^{-1} = I$$

$$(C * C^{-1})^T = I^T$$

$$C^T * (C^{-1})^T = I^T$$

$$(C^T)^{-1} C^T * (C^{-1})^T = (C^T)^{-1} * I^T$$

$$I * (C^{-1})^T = (C^T)^{-1} * I^T$$

$$I * (C^{-1})^T = (C^T)^{-1} * I$$

$$(C^{-1})^T = (C^T)^{-1} * I$$

$$(C^{-1})^T = (C^T)^{-1}$$

□