

Final

Ex 5.1

There are three Options in total

Option 1.

$$u_{12} := a_{11} / a_{22}$$

$$a_{11} := a_{11} - u_{12} a_{12} a_{12}^T \quad (\text{updating the upper triangle})$$

$$\text{Finally, } a_{12} := u_{12}$$

Option 2.

$$a_{12} := a_{12} / a_{22}$$

$$a_{11} := a_{11} - a_{22} a_{12} a_{12}^T$$

(updating the upper triangle)

Option 3:

$$a_{11} := a_{11} - \frac{1}{a_{22}} a_{12} a_{12}^T$$

(updating the upper triangle)

$$a_{12} := a_{12} / a_{22}$$