

$E_{kl\alpha}$

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▶ Start

▶ End

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$$E_{kl\alpha} = (a_{ij}) \text{ if } k \neq l, \quad a_{ij} = \begin{cases} 1 & \text{if } i = j \\ \alpha & \text{if } i = k, j = l \\ 0 & \text{otherwise} \end{cases}$$

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What does  $E_{kl\alpha}A$  mean?

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What does  $E_{kl\alpha}A$  mean?

A matrix obtained by multiplying the  $l$  row of matrix A by  $\alpha$  times the  $k$  row of matrix A and adding it to the  $k$  row.

$$E_{kl\alpha} = (a_{ij}) \text{ if } k \neq l, \quad a_{ij} = \begin{cases} 1 & \text{if } i = j \\ \alpha & \text{if } i = k, j = l \\ 0 & \text{otherwise} \end{cases}$$

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A matrix obtained by multiplying the  $l$  row of matrix A by  $\alpha$  times the  $k$  row of matrix A and adding it to the  $k$  row.

What does  $AE_{kl\alpha}$  mean?

$$E_{kl\alpha} = (a_{ij}) \text{ if } k \neq l, \quad a_{ij} = \begin{cases} 1 & \text{if } i = j \\ \alpha & \text{if } i = k, j = l \\ 0 & \text{otherwise} \end{cases}$$

What does  $E_{kl\alpha}A$  mean?

A matrix obtained by multiplying the  $l$  row of matrix A by  $\alpha$  times the  $k$  row of matrix A and adding it to the  $k$  row.

What does  $AE_{kl\alpha}$  mean?

A matrix obtained by multiplying the  $l$  column of matrix A by  $\alpha$  times the  $k$  column of matrix A and adding it to the  $k$  column.

$$E_{kl\alpha} = (a_{ij}) \text{ if } k \neq l, \quad a_{ij} = \begin{cases} 1 & \text{if } i = j \\ \alpha & \text{if } i = k, j = l \\ 0 & \text{otherwise} \end{cases}$$

What does  $E_{kl\alpha}A$  mean?

A matrix obtained by multiplying the  $l$  row of matrix A by  $\alpha$  times the  $k$  row of matrix A and adding it to the  $k$  row.

What does  $AE_{kl\alpha}$  mean?

A matrix obtained by multiplying the  $l$  column of matrix A by  $\alpha$  times the  $k$  column of matrix A and adding it to the  $k$  column.

$$(E_{kl\alpha})^{-1} = E_{kl(-\alpha)}$$

Github:

<https://min7014.github.io/math20240623001.html>

Click or paste URL into the URL search bar,  
and you can see a picture moving.