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7.2.5 When Gaussian Elimination Fails Altogether

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## 7.2.5 When Gaussian Elimination Fails Altogether

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		limination (LU factorization) with $oldsymbol{A}oldsymbol{x}=oldsymbol{b}$ where $oldsymbol{A}$ is	a square matrix,
one of three things can happe The process completes with	en: n no zeroes on the d	limination (LU factorization) with $m{A}m{x}=m{b}$ where $m{A}$ is liagonal of the resulting matrix $m{U}$ . Then $m{A}=m{L}m{U}$ and $m{L}m{z}=m{b}$ followed by $m{U}m{x}=m{z}$ .	
The process completes with unique solution, which can lead to the process requires row expenses.	en: n no zeroes on the d be found by solving a xchanges, completin	liagonal of the resulting matrix $\emph{\textbf{U}}$ . Then $\emph{\textbf{A}}=\emph{\textbf{L}}\emph{\textbf{U}}$ and	$A oldsymbol{x} = oldsymbol{b}$ has a trix $oldsymbol{U}$ . Then
The process completes with unique solution, which can let $PA = LU$ and $Ax = b$ has the process requires row expression.	en:  n no zeroes on the delete found by solving and exchanges, completing as a unique solution, exchanges, but at sores (unless the zero approximation).	liagonal of the resulting matrix $\pmb{U}$ . Then $\pmb{A}=\pmb{L}\pmb{U}$ and $\pmb{L}\pmb{z}=\pmb{b}$ followed by $\pmb{U}\pmb{x}=\pmb{z}$ . Ing with no zeroes on the diagonal of the resulting mat	$Ax=b$ has a trix $oldsymbol{U}$ . Then $oldsymbol{U}oldsymbol{x}=oldsymbol{z}$ . the diagonal, at
The process completes with unique solution, which can be the process requires row expenses $PA = LU$ and $Ax = b$ has the process requires row expenses requires row expenses the process fail but leaves a zero on the diagram of the process and the process fail but leaves a zero on the diagram of the process and the process are process.	en:  In no zeroes on the divide found by solving and solution, as a unique solution, as a unique solution, as (unless the zero appropriate).  In great detail in future.	liagonal of the resulting matrix $m{U}$ . Then $m{A} = m{L}m{U}$ and $m{L}m{z} = m{b}$ followed by $m{U}m{x} = m{z}$ . In a with no zeroes on the diagonal of the resulting mate which can be found by solving $m{L}m{z} = m{P}m{b}$ followed by the point no row can be found that puts a nonzero on appears as the last element on the diagonal, in which our weeks. For now, we simply state that in this case $m{z}$ are weeks. For now, we simply state that in this case $m{z}$ are	$d  Ax = b$ has a trix $m{U}$ . Then $d  m{U} m{x} = m{z}$ . the diagonal, at case it completes,

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