

solving linear equations with LAPACK/Matlab

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- *From:* wakun@xxxxxxxxx
 - *Date:* 17 Dec 2005 05:05:03 -0800
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Hi there,

I am solving linear equations with Matlab and now I need to use C++ instead. The size of the matrix is about 200x200 and is invertible. In matlab, I solve the problem as follow

```
%Ax = b the system  
x=inv(A)*b
```

(BTW, is it a right way to solve the system in matlab? Any better routine for that problem?)

Anyway, for some reason, my tutor ask me to solve the same problem in C++. So I am going to solve it with the help of LAPACK and the C++ wrapper (LAPACK++). However, I am very new to LAPACK and the documentation seems not very friendly to user. I guess I should find the routine to calculate the inverse of the matrix first and multiply the inverse matrix with the vector on RHS (b). Would you please tell me if I am doing right, any function in LAPACK for solving such system directly ? Any example for solving tridiagonal system, five-diagonal system and seven-diagonal system ?

Thanks in advance.

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- *Follow-Ups:*
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◇ *From:* Peter Spellucci
 - ◆ ***Re: solving linear equations with LAPACK/Matlab***
◇ *From:* Evgenii Rudnyi
 - ◆ ***Re: solving linear equations with LAPACK/Matlab***
◇ *From:* Gordon
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