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# MATLAB programming course for beginners, supported by Wagatsuma Lab@Kyutech

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## Specifications and requirements

1. @Time : 2022-8-10
2. @Author : Hiroaki Wagatsuma
3. @Site : [https://github.com/hirowgit/1A1\\_matlab\\_intermediate\\_course](https://github.com/hirowgit/1A1_matlab_intermediate_course)
4. @IDE : MATLAB R2022a
5. @File : lec0\_step2.m

## Main program

```
wd=4;  
% t=0:2*pi/wd:2*pi+2*pi/wd;  
t=0:2*pi/wd:2*pi;  
x=cos(t);  
y=sin(t);
```

```
figure(3); clf;
plot(x,y, '-.', 'MarkerSize', 24);
grid on;
set(gca, 'xlim', [-1.1 1.1], 'ylim', [-1.1 1.1]);

syms A [2 2]
syms b [2 1]

A*b

Rt=@(th) [cos(th) -sin(th); sin(th) cos(th)];

xyD=[1;1];

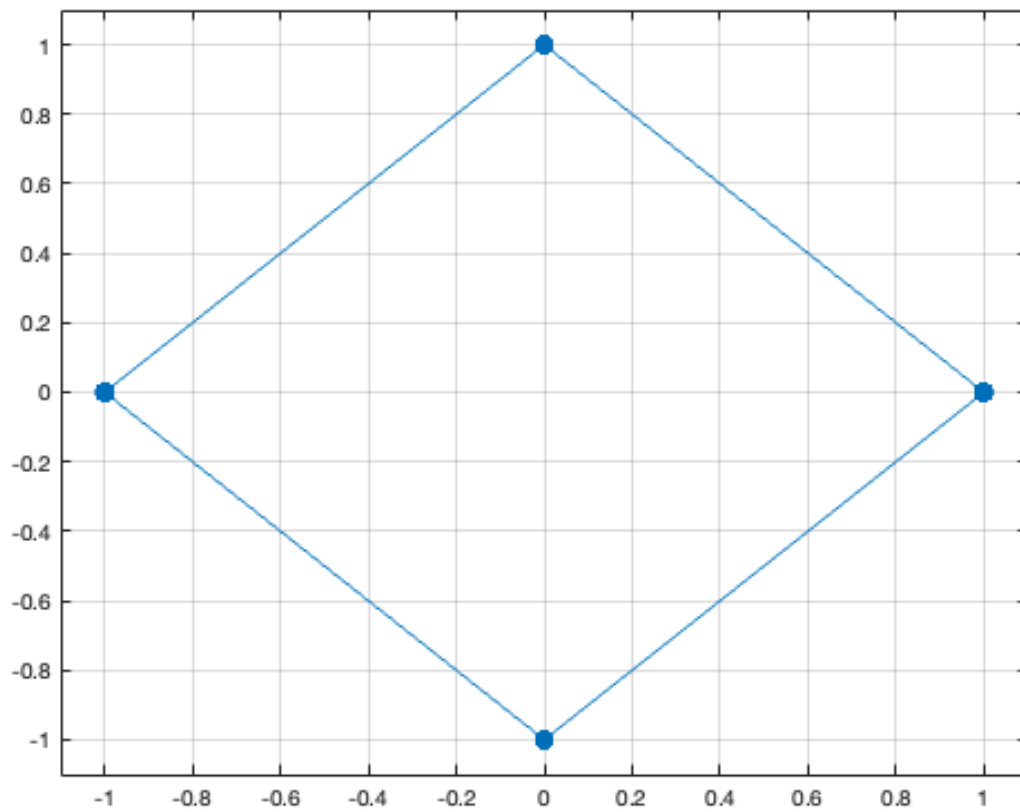
xyD2=Rt(pi/2)*xyD;

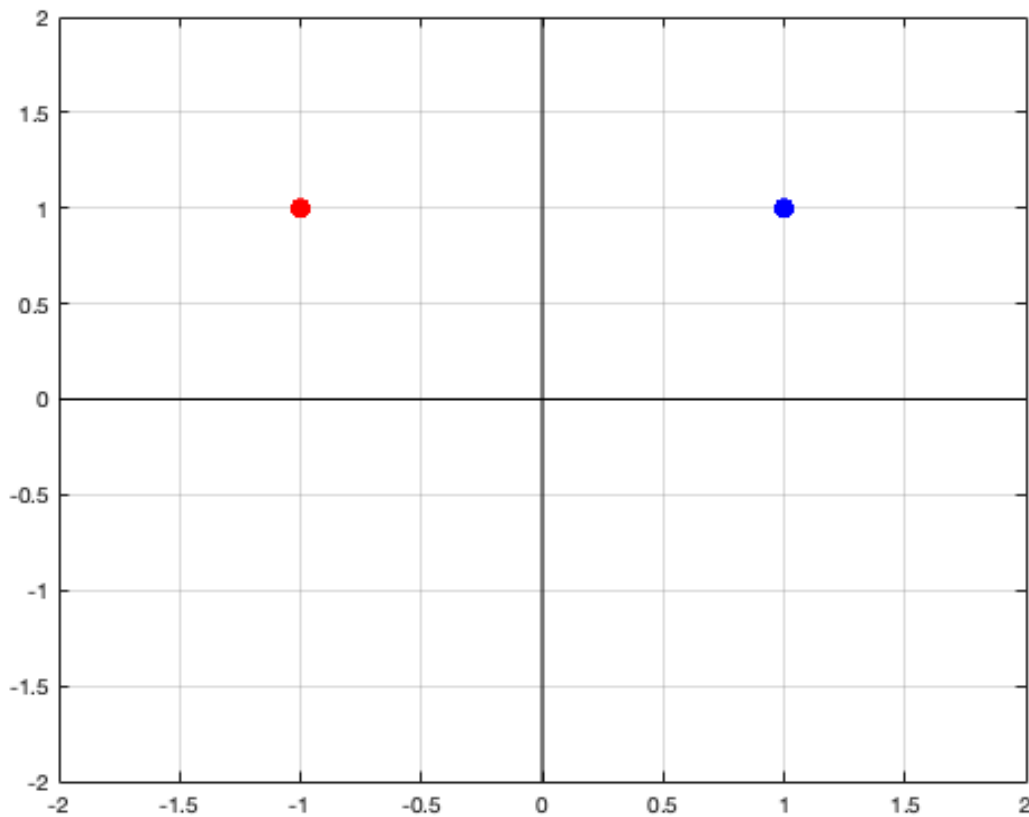
figure(4); clf;
plot(xyD(1),xyD(2), 'b.', 'MarkerSize', 24), hold on;
plot(xyD2(1),xyD2(2), 'r.', 'MarkerSize', 24), hold on;
plot([-2 2],[0 0], 'k-');
plot([0 0],[-2 2], 'k-');

grid on;

ans =

A1_1*b1 + A1_2*b2
A2_1*b1 + A2_2*b2
```





## Supplementary information to publish

If you want to make a pdf or html file on the code, you can use the code "x\_publish\_each\_codes.m" in the same folder. Please change the file name as "this\_file\_tag='lec\*\_step\*'" (\* will be replaced to the number of the target file).

The code "x\_publish\_all\_codes.m" works for such a publication applying to all codes in the same folder (Note: "x\_publish\_all\_codes\_sub.m" should be located in the same folder).

*Published with MATLAB® R2022a*