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## Table of Contents

Quiz030712 use of fsolve .....	1
Investigate problem space .....	1
Find the intersection of $\sin(x)$ and $\cos(x)$ where $x > 0$ .....	1

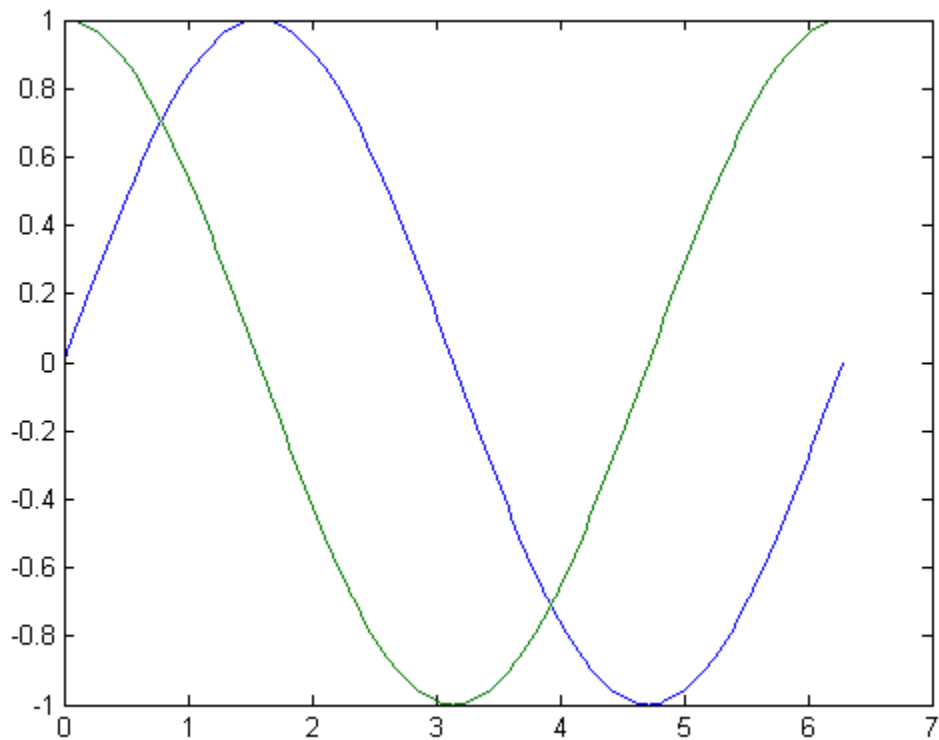
## Quiz030712 use of fsolve

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```
clear; clc;  
format compact;
```

## Investigate problem space

```
x = linspace(0,2*pi,201);  
y1 = sin(x);  
y2 = cos(x);  
plot(x,y1,x,y2)
```



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## Find the intersection of $\sin(x)$ and $\cos(x)$ where $x > 0$

```
fun = @(x) sin(x)-cos(x);  
intersection = fsolve(fun,0.7)  
fun_value = sin(intersection)
```

*Equation solved.*

*fsolve completed because the vector of function values is near zero as measured by the default value of the function tolerance, and the problem appears regular as measured by the gradient.*

```
intersection =  
    0.7854  
fun_value =  
    0.7071
```

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