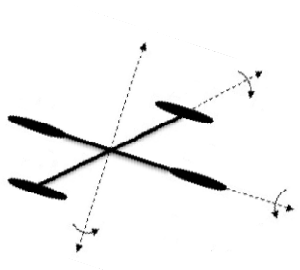

MATLAB

기초 연산법



- 콜론(:) 연산자

```
Command Window
>> 1:5

ans =

     1     2     3     4     5

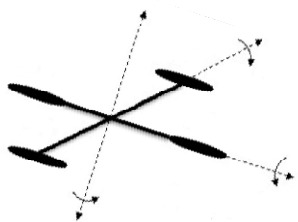
fx >>
```

```
Command Window
>> a = 1:0.5:2

a =

    1.0000    1.5000    2.0000

fx >>
```



- 행렬 만들기

```
Command Window
>> A = [1 2 3; 2 2 2; 1 2 3]

A =

     1     2     3
     2     2     2
     1     2     3

fx >>
```

```
Command Window
>> A = [1,2,3;2,2,2;1,2,3]

A =

     1     2     3
     2     2     2
     1     2     3

fx >>
```

```
Command Window
>> A = [1 2 3
        2 2 2
        1 2 3]

A =

     1     2     3
     2     2     2
     1     2     3

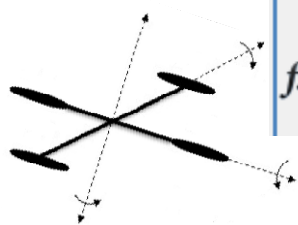
fx >>
```

```
Command Window
>> A = [1 2 3;
        2 2 2;
        1 2 3]

A =

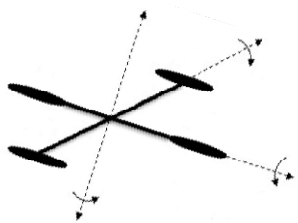
     1     2     3
     2     2     2
     1     2     3

fx >> |
```



- Dot (.) 연산

```
Command Window
>> A = 1:5
A =
     1     2     3     4     5
>> B = 1:2:10
B =
     1     3     5     7     9
>> A+B
??? Error using ==> mtimes
Inner matrix dimensions must agree.
fx >>
```





```
Command Window
>> A = 1:5

A =

     1     2     3     4     5

>> B = 1:2:10

B =

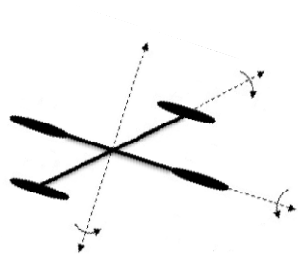
     1     3     5     7     9

>> A+B'

ans =

     95

fx >> |
```





```
Command Window
>> A = 1:5

A =

     1     2     3     4     5

>> B = 1:2:10

B =

     1     3     5     7     9

>> A.*B

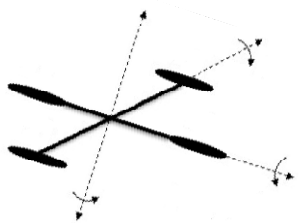
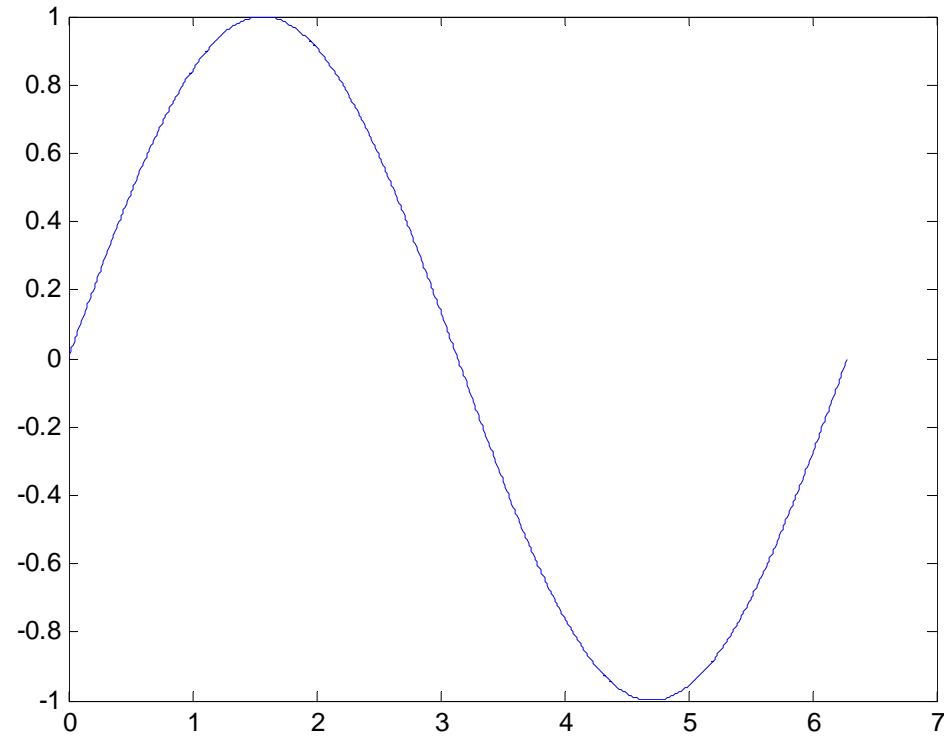
ans =

     1     6    15    28    45

fx >> |
```

- Plot 명령을 이용한 그래픽 출력

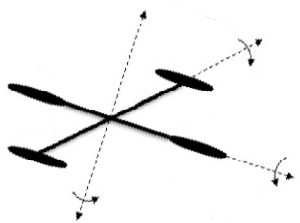
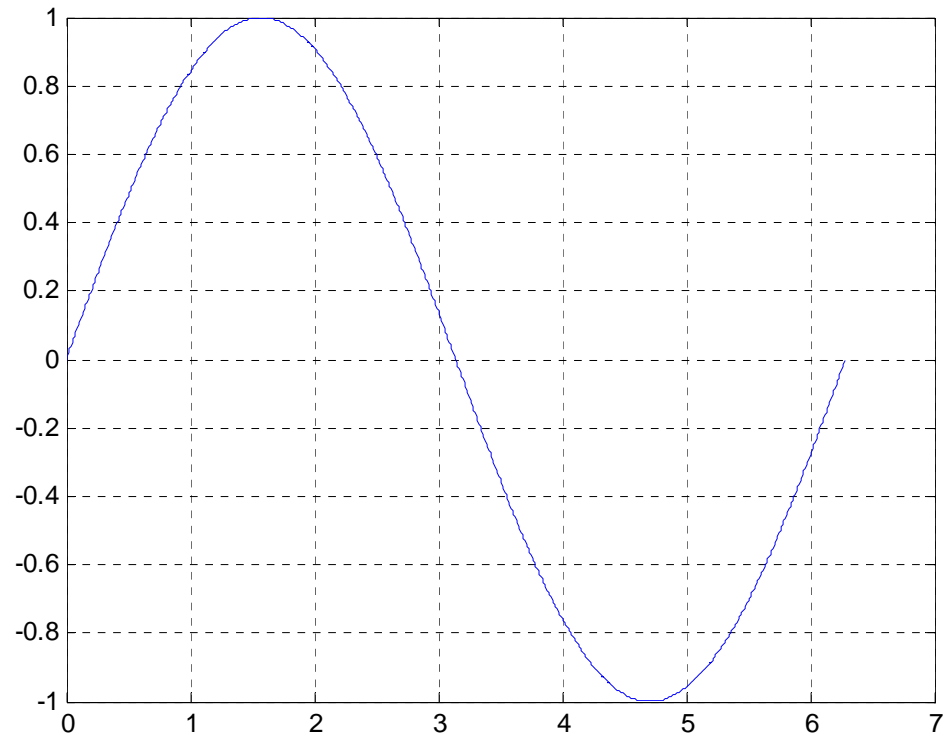
```
Command Window
>> t=0:0.01:2*pi;
>> y=sin(t);
>> plot(t, y)
fx >> |
```



Command Window

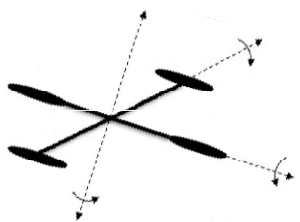
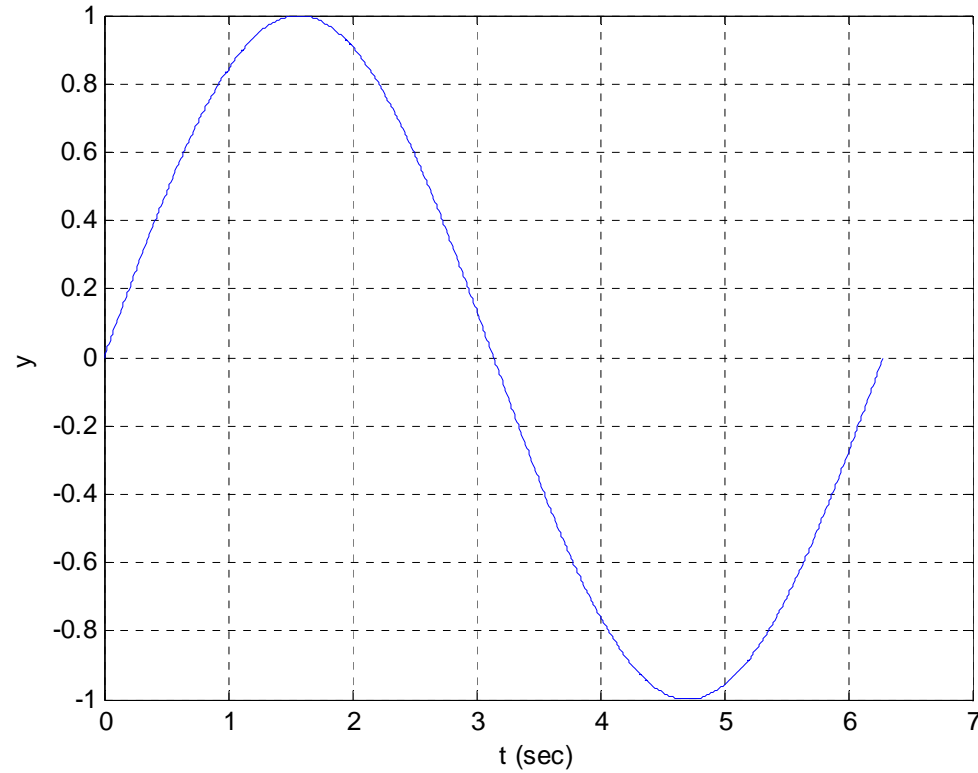
```
>> t=0:0.01:2*pi;  
>> y=sin(t);  
>> plot(t, y)  
>> grid on
```

fx >>



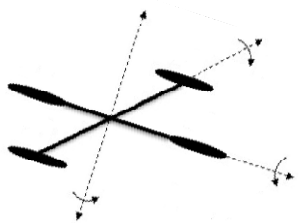
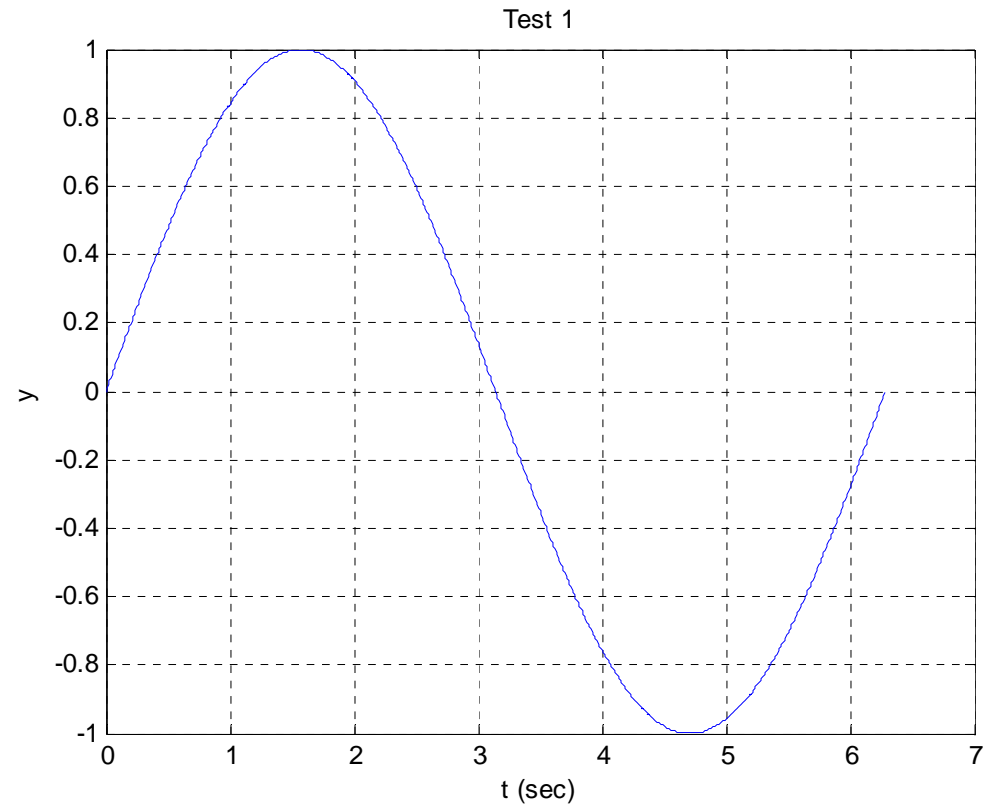
Command Window

```
>> t=0:0.01:2*pi;  
>> y=sin(t);  
>> plot(t, y)  
>> grid on  
>> xlabel('t (sec)')  
>> ylabel('y')  
fx >>
```



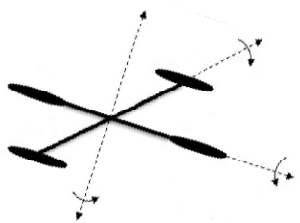
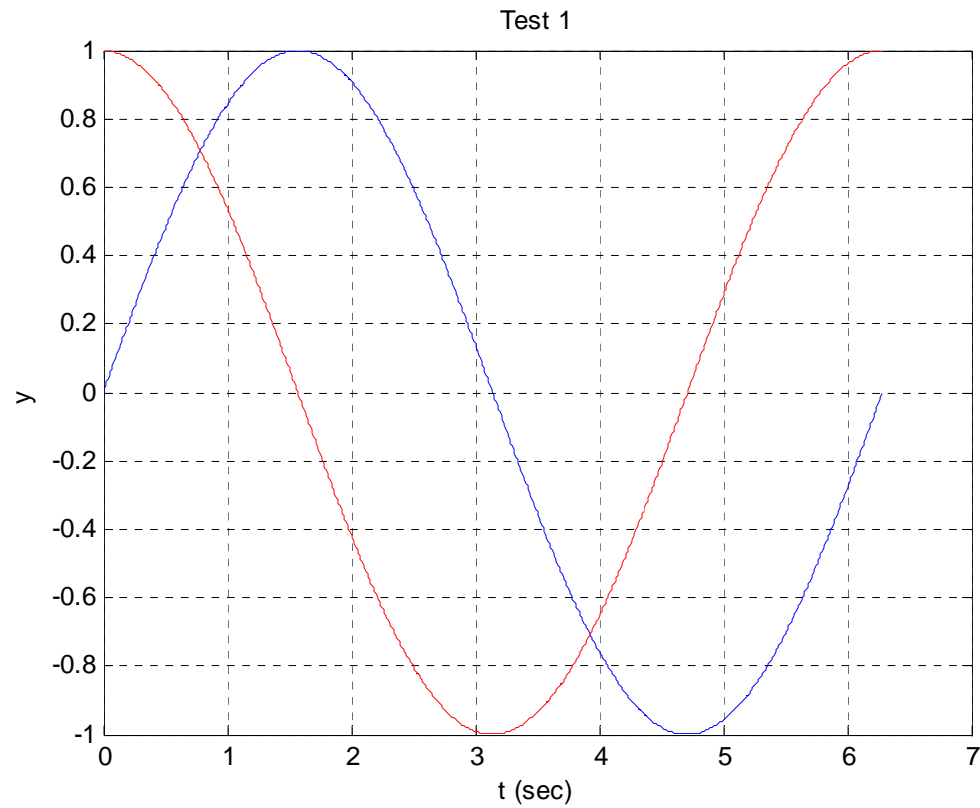
Command Window

```
>> t=0:0.01:2*pi;  
>> y=sin(t);  
>> plot(t, y)  
>> grid on  
>> xlabel('t (sec)')  
>> ylabel('y')  
>> title('Test 1')  
fx >> |
```



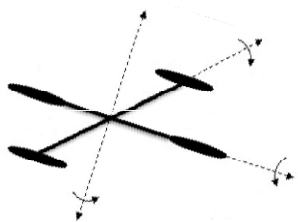
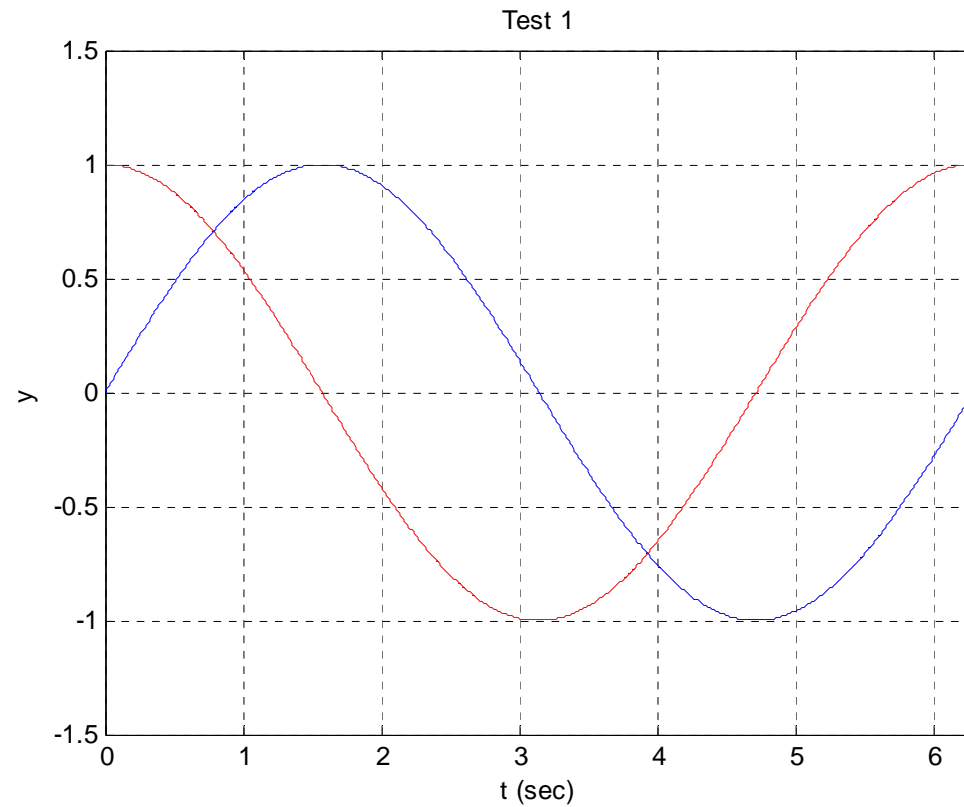
Command Window

```
>> t=0:0.01:2*pi;  
>> y=sin(t);  
>> plot(t, y)  
>> grid on  
>> xlabel('t (sec)')  
>> ylabel('y')  
>> title('Test 1')  
>> y1 = cos(t);  
>> hold on  
>> plot(t, y1, 'r')  
fx >> |
```



Command Window

```
>> t=0:0.01:2*pi;  
>> y=sin(t);  
>> plot(t, y)  
>> grid on  
>> xlabel('t (sec)')  
>> ylabel('y')  
>> title('Test 1')  
>> y1 = cos(t);  
>> hold on  
>> plot(t, y1, 'r')  
>> axis([0 2*pi -1.5 1.5])  
fx >>
```



Command Window

```
>> t=0:0.01:2*pi;  
>> y=sin(t);  
>> plot(t, y)  
>> grid on  
>> xlabel('t (sec)')  
>> ylabel('y')  
>> title('Test 1')  
>> y1 = cos(t);  
>> hold on  
>> plot(t, y1, 'r')  
>> axis([0 2*pi -1.5 1.5])  
>> legend('sin(t)', 'cos(t)')  
fx >> |
```

