

HW01

2020320039 이승준

```
>> 1+3
```

```
ans =
```

```
4
```

```
>> 13-4
```

```
ans =
```

```
9
```

```
>> 12*3
```

```
ans =
```

```
36
```

```
>> 36/3
```

```
ans =
```

```
12
```

명령 창

```
>> x = [1 2 3 4 5]; y = [5 4 3 2 1];
```

```
>> x < y
```

```
ans =
```

```
1×5 logical 배열
```

```
1 1 0 0 0
```

```
>> x <= y
```

```
ans =
```

```
1×5 logical 배열
```

```
1 1 1 0 0
```

```
>> x == y
```

```
ans =
```

```
1×5 logical 배열
```

```
0 0 1 0 0
```

```
>> x >= y
```

```
ans =
```

```
1×5 logical 배열
```

```
0 0 1 1 1
```

```
>> x > y
```

```
ans =
```

```
1×5 logical 배열
```

```
fx 0 0 0 1 1
```

편집기 - C:\Academic Stuff\3_2\수치해석\class_09_08_03.m

```
명령 창
>> a = [true true false false];
>> b = [true false true false];
>> a & b

ans =

    1 × 4 logical 배열

    1    0    0    0

>> a | b

ans =

    1 × 4 logical 배열

    1    1    1    0

fx >> |
```

```
>> for x=0:2:10
```

```
    a = 2^x
```

```
end
```

```
a =
```

```
    1
```

```
a =
```

```
    4
```

```
a =
```

```
   16
```

```
a =
```

```
   64
```

```
a =
```

```
  256
```

```
a =
```

```
 1024
```

```
|  
fx >> |
```

```
편집기 - C:\Academic Stuff\3_2\수치해석\hw_01.m
class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m x +
13 % x > y
14 %
15 % x = [true true false false];
16 % y = [true false true false];
17 %
18 % x & y
19 % x | y
20 %
21 %
22 %
23 % for x=0:2:10
24 %     a = 2^x
25 % end
26 %
27
28 a = 3;
29 if a<1
30     b = a+1
31 else
32     c = a+2
33 end
```

명령 창

```
>> edit hw_01
>> hw_01

c =

     5

fx >>
```

3.2 수지해석

```
편집기 - C:\Academic Stuff\3_2수지해석\hw_01.m
class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m x +
20 %
21 %
22 %
23 % for x=0:2:10
24 %     a = 2^x
25 % end
26 %
27 %
28 % a = 3;
29 % if a<1
30 %     b = a+1
31 % else
32 %     c = a+2
33 % end
34
35
36 a = 1;
37 while a < 4
38     a = a+1
39 end
40
```

명령 창

```
>> hw_01

a =

     2

a =

     3

a =

     4

fx >>
```

편집기 - C:\Academic Stuff\3_2\수치해석\hw_01.m

```
class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m x +
24      %      a = 2^x
25      % end
26      %
27      %
28      % a = 3;
29      % if a<1
30      %      b = a+1
31      % else
32      %      c = a+2
33      % end
34      %
35      %
36      % a = 1;
37      % while a < 4
38      %      a = a+1
39      % end
40
41
42      a = 1; b = 2; c = 3;
43      b=2
44
```

명령 창

```
>> hw_01

b =

     2

fx >>
```

class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m x +

```

32 % c = a+z
33 % end
34 %
35 %
36 % a = 1;
37 % while a < 4
38 %     a = a+1
39 % end
40 %
41 %
42 % a = 1; b = 2; c = 3;
43 % b=2
44
45 %
46 % x = 1:10;
47 % y = x.^2;
48
49 plot(x, y, '--rs', 'Linewidth', 2, 'MarkerEdgeColor', 'k', ...
50      'MarkerSize', 10);
51
52

```

명령 창

```

>> hw_01
fx >>

```

Figure 1

파일(F) 편집(E) 보기(V) 삽입(I) 툴(T) 데스크탑(D) 창(W) 도움말(H)

JIT ▶ 3_2 ▶ 수시애석

편집기 - C:\Academic Stuff\3_2\수시애석\hw_01.m

class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m x +

```

35 %
36 % a = 1;
37 % while a < 4
38 %     a = a+1
39 % end
40 %
41 %
42 % a = 1; b = 2; c = 3;
43 % b=2
44
45 %
46 % x = 1:10;
47 % y = x.^2;
48 %
49 % plot(x, y, '--rs', 'Linewidth', 2, 'MarkerEdgeColor', 'k', ...
50 %     'MarkerSize', 10);
51
52
53 f = inline('x^3+6*x-2', 'x');
54 f(3)
55

```

명령 창

```

>> hw_01

ans =

    43

fx >>

```

```
편집기 - C:\Academic Stuff\3_2#수치해석#hw_01.m
class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m x +
36 % a = 1;
37 % while a < 4
38 %     a = a+1
39 % end
40 %
41 %
42 % a = 1; b = 2; c = 3;
43 % b=2
44
45 %
46 % x = 1:10;
47 % y = x.^2;
48 %
49 % plot(x, y, '--rs', 'Linewidth', 2, 'MarkerEdgeColor', 'k', ...
50 %     'MarkerSize', 10);
51
52
53 f = inline('x.^3+6*x-2', 'x');
54 f([3 4 5])
55
56
```

명령 창

```
>> hw_01
ans =
    43    86   153
fx >>
```

```
class_09_08.m x class_09_08_02.m x class_09_08_03.m x hw_01.m
40 %
41 %
42 % a = 1; b = 2; c = 3;
43 % b=2
44
45 %
46 % x = 1:10;
47 % y = x.^2;
48 %
49 % plot(x, y, '--rs', 'Linewidth', 2, 'MarkerEdgeCo:
50 %     'MarkerSize', 10);
51 %
52 % f = inline('x^3+6*x-2', 'x');
53 % f(3)
54 %
55 % f = inline('x.^3+6*x-2', 'x');
56 % f([3 4 5])
57
58 x = linspace(0, 5, 6)|
59
60
```

명령 창

```
>> hw_01

x =

    0     1     2     3     4     5

fx >>
```

```

51 %
52 % f = inline('x^3+6*x-2', 'x');
53 % f(3)
54 %
55 % f = inline('x.^3+6*x-2', 'x');
56 % f([3 4 5])
57
58 % x = linspace(0, 5, 6)
59
60 x = linspace(0, 7, 28);
61 plot(x, sin(x), 'k--', x, cos(x), 'ko');
62 title('trigonometric functions');
63 xlabel('x');
64 ylabel('f(x)');
65 legend('sin(x)', 'cos(x)');
66 grid on;
67 text(pi, sin(pi), 'sin(\pi)');
68 axis([-0.1 7.1 -1.1 1.1]);
69

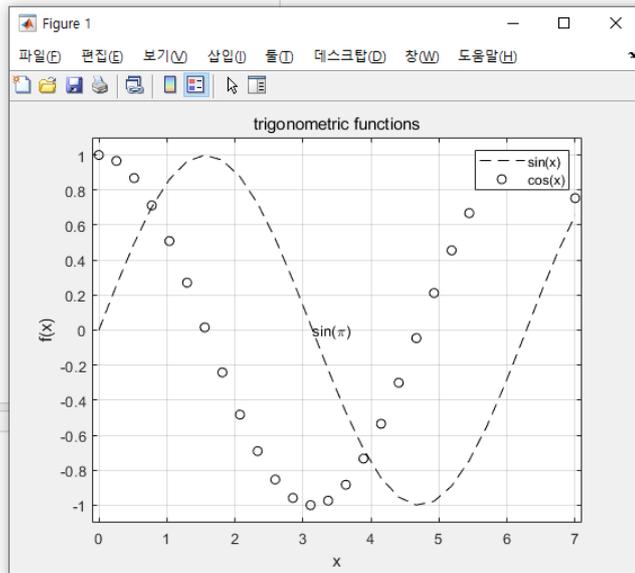
```

명령 창

```

>> hw_01
>> hw_01
>> hw_01
fx >>

```



tuff > 3_2 > 수치해석

```

편집기 - C:\Academic Stuff\3_2수치해석\hw_01.m
class_09_08_08.m class_09_08_02.m class_09_08_03.m hw_01.m
56 % x = linspace(0, 5, 6)
59
60 % x = linspace(0, 7, 28);
61 % plot(x, sin(x), 'k--', x, cos(x), 'ko');
62 % title('trigonometric functions');
63 % xlabel('x');
64 % ylabel('f(x)');
65 % legend('sin(x)', 'cos(x)');
66 % grid on;
67 % text(pi, sin(pi), 'sin(\pi)');
68 % axis([-0.1 7.1 -1.1 1.1]);
69
70 t = linspace(0, 2*pi, 100);
71 x = 2*cos(t);
72 y = 2*sin(t);
73
74 plot(x, y)
75
76
77
78

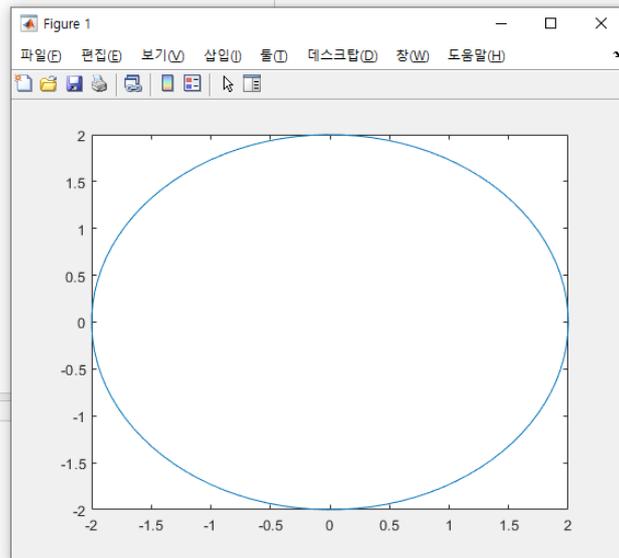
```

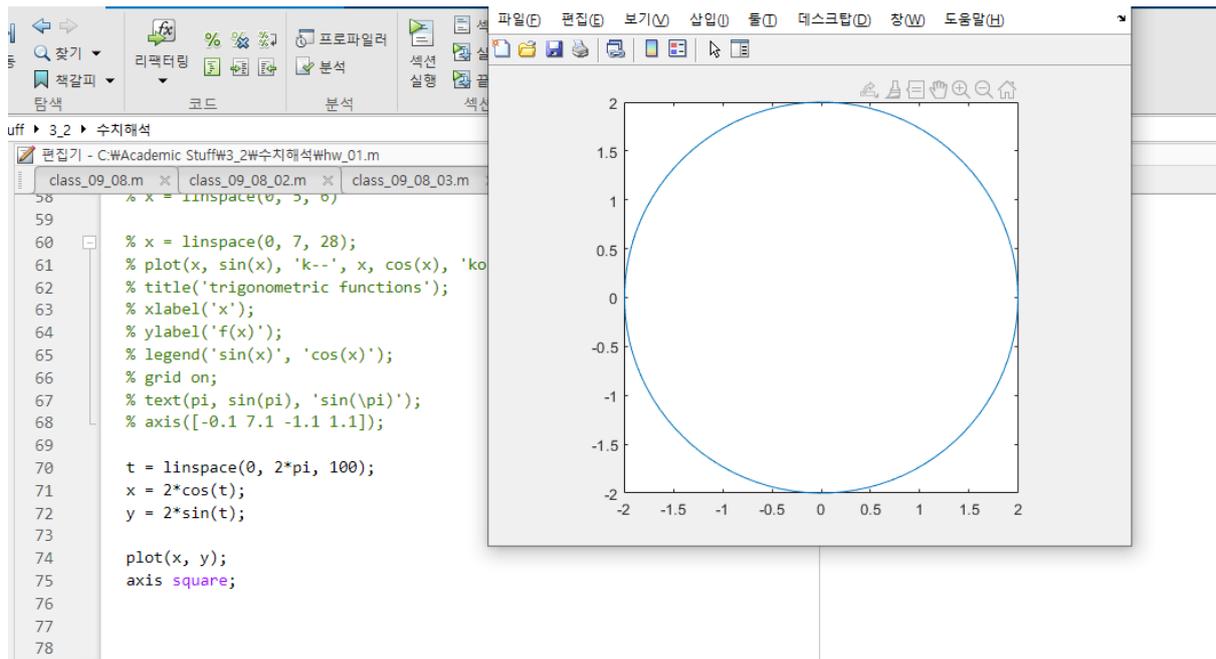
명령 창

```

>> hw_01
>> hw_01
>> hw_01
>> hw_01
fx >>

```

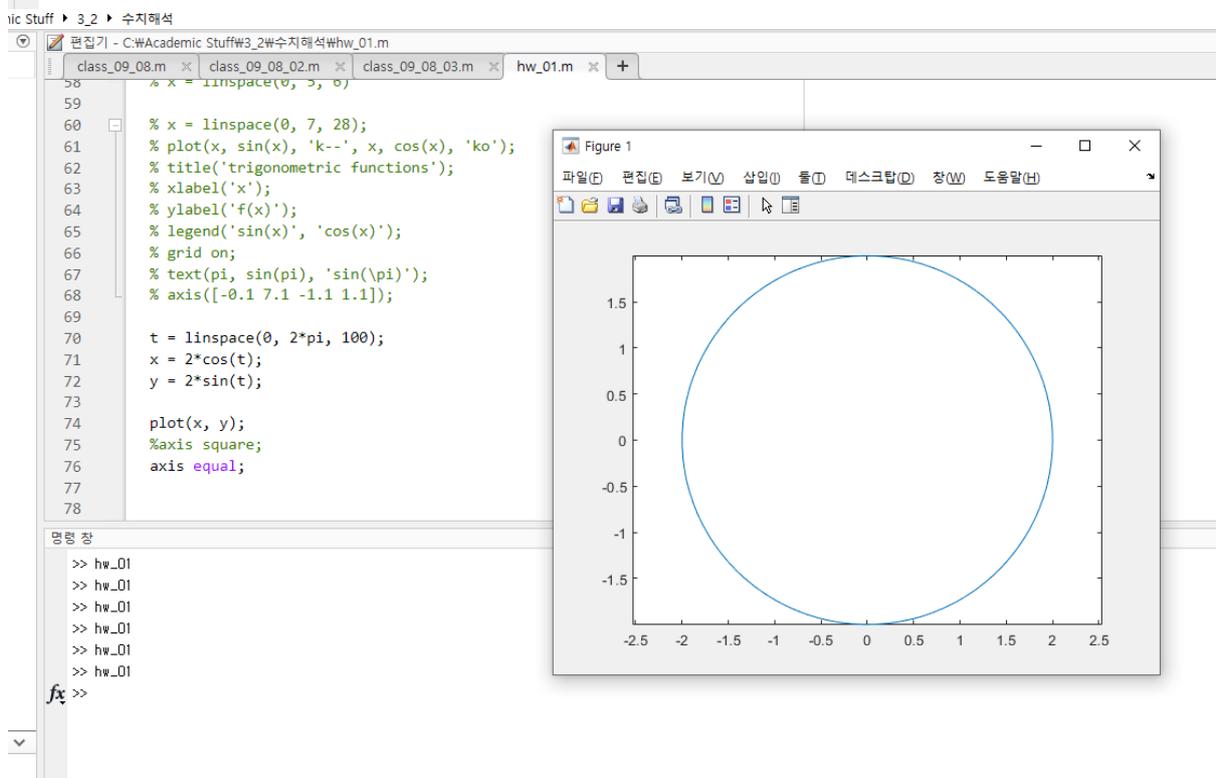




명령 창

```

>> hw_01
>> hw_01
>> hw_01
>> hw_01
>> hw_01
fx >>
  
```




```
79  
80     ones(3)  
81     zeros(2)  
82  
83     c = [1 2 3];  
84     length(c)  
85  
86     A = [1 2 3; 4 5 6; 7 8 9];  
87     sum(A)  
88  
89     abs(-3)  
90
```

명령 창

```
ans =  
  
     1     1     1  
     1     1     1  
     1     1     1  
  
ans =  
  
     0     0  
     0     0  
  
ans =  
  
     3  
  
ans =  
  
    12    15    18  
  
ans =  
  
     3
```

편집기 - C:\Academic Stuff\3_2\수치해석\hw_01.m

class_09_08.m × class_09_08_02.m × class_09_08_03.m × hw_01.m × +

```
75 % %axis square;
76 % %axis equal;
77 % axis image;
78
79 %
80 % ones(3)
81 % zeros(2)
82 %
83 % c = [1 2 3];
84 % length(c)
85 %
86 % A = [1 2 3; 4 5 6; 7 8 9];
87 % sum(A)
88 %
89 % abs(-3)
90
91
92
93 fp = fopen('test.m', 'w');
94 fprintf(fp, '%d %d\n', 1, 2);
95 fprintf(fp, '%f %f\n', 3.5, 4.5);
96 fprintf(fp, '%e %e\n', 100, 1000);
97 fclose(fp);
98
```

명령 창

```
>> hw_01
fx >>
```

C:\Academic Stuff\3_2\수치해석\test.m

편집기 퍼블리시 보기

새로 만들기 열기 저장 인쇄 이동 찾기 책갈피 탐색

파일

1	1 2
2	3.500000 4.500000
3	1.000000e+02 1.000000e+03
4	

iff ▶ 3_2 ▶ 수치해석

```
편집기 - C:\Academic Stuff\3_2수치해석\hw_01.m  
class_09_08.m × class_09_08_02.m × class_09_08_03.m × hw_01.m ×  
82        %  
83        % c = [1 2 3];  
84        % length(c)  
85        %  
86        % A = [1 2 3; 4 5 6; 7 8 9];  
87        % sum(A)  
88        %  
89        % abs(-3)  
90  
91        %  
92        %  
93        % fp = fopen('test.m', 'w');  
94        % fprintf(fp, '%d %d\n', 1, 2);  
95        % fprintf(fp, '%f %f\n', 3.5, 4.5);  
96        % fprintf(fp, '%e %e\n', 100, 1000);  
97        % fclose(fp);  
98  
99        a = load('test.m')  
100  
101  
102  
103  
104  
105
```

명령 창

```
>> hw_01  
>> hw_01  
  
a =  
  
1.0e+03 *  
  
0.0010    0.0020  
0.0035    0.0045  
0.1000    1.0000  
  
fx >>
```

```
82 %
83 % c = [1 2 3];
84 % length(c)
85 %
86 % A = [1 2 3; 4 5 6; 7 8 9];
87 % sum(A)
88 %
89 % abs(-3)
90
91 %
92 %
93 % fp = fopen('test.m', 'w');
94 % fprintf(fp, '%d %d\n', 1, 2);
95 % fprintf(fp, '%f %f\n', 3.5, 4.5);
96 % fprintf(fp, '%e %e\n', 100, 1000);
97 % fclose(fp);
98
99 % a = load('test.m')
100
101
102 Random_matrix = rand(2, 3)
103
104
105
```

명령 창

```
>> hw_01

Random_matrix =

    0.6324    0.2785    0.9575
    0.0975    0.5469    0.9649
```

fx >>

iff ▶ 3_2 ▶ 수치해석

```
편집기 - C:\Academic Stuff\3_2\수치해석\hw_01.m
class_09_08.m class_09_08_02.m class_09_08_03.m hw_01.m
83 % c = [1 2 3];
84 % length(c)
85 %
86 % A = [1 2 3; 4 5 6; 7 8 9];
87 % sum(A)
88 %
89 % abs(-3)
90
91 %
92 %
93 % fp = fopen('test.m', 'w');
94 % fprintf(fp, '%d %d\n', 1, 2);
95 % fprintf(fp, '%f %f\n', 3.5, 4.5);
96 % fprintf(fp, '%e %e\n', 100, 1000);
97 % fclose(fp);
98
99 % a = load('test.m')
100
101 %
102 % Random_matrix = rand(2, 3)
103
104 rand('seed', 3);
105 rand(2, 3)
106
```

명령 창

```
>> hw_01

ans =

    0.5387    0.0512    0.3010
    0.3815    0.2851    0.1277

fx >>
```