

```

1 function [root,fx,ea,iter]=bisect(func,xl,xu,es,maxit,varargin)
2 test = func(xl,varargin{:})*func(xu,varargin{:});
3 if test>0,error('no sign change'),end
4 iter = 0; xr = xl; ea = 100;
5 while (1)
6 xrold = xr;
7 xr = (xl + xu)/2;
8 iter = iter + 1;
9 if xr ~= 0, ea = abs((xr - xrold)/xr) * 100; end
10 test = func(xl,varargin{:})*func(xr,varargin{:});
11 if test < 0
12 xu = xr;
13 elseif test > 0
14 xl = xr;
15 else
16 ea = 0;
17 end
18 if ea <= es || iter >= maxit,break,end
19 end
20 root = xr; fx = func(xr, varargin{:});

```

이름	값
ea	5.3450e-05
fm	@(m)sqrt(9.81*m/0....
fx	4.6089e-07
iter	21
mass	142.7377

MATLAB을 처음 사용한다면 [시작하기](#)를 참조하십시오.

```

>> fm=@(m) sqrt(9.81*m/0.25) ...
+tanh(sqrt(9.81+0.25/m)*4)-36;
[mass fx ea iter]=bisect(fm,40,200,0.0001,80)

```

mass =

142.7377

fx =

4.6089e-07

ea =

5.3450e-05

```
bisect.m fixed.m +
1 function [root,ea,iter]=fixed(g, x, es, maxit, varargin)
2     iter = 0; ea=100;
3     while (1)
4         xold = x;
5         x = g(x, varargin{:});
6         iter = iter + 1;
7         if x ~= 0, ea = abs((x - xold)/x) * 100; end
8         if ea <= es || iter >= maxit, break, end
9     end
10    root = x;
11 end
```

이름	값
ea	7.1726e-05
g	@(x)exp(-x)
iter	27
root	0.5671

MATLAB을 처음 사용한다면 [시작하기](#)를 참조하십시오.

```
>> g = @(x) exp(-x);
[root,ea,iter] = fixed(g, 0, 1e-4, 50)

root =

    0.5671

ea =

    7.1726e-05

iter =

    27
```