

calculate Pi

built-in

Notice: always check is there any built-in function first

```
% doc('pi')  
fprintf('%.10f', pi)
```

3.1415926536

calculate Pi yourself

Liu Hui's method (not understood right now frankly)

```
% initial value  
k = 1;  
n = 3;  
  
for index0 = 1:10  
    n = 2*n;  
    s = sqrt(2 - k);  
    k = sqrt(2 + k);  
    p = n*s/2;  
    fprintf('n, my_pi = %10d, %.10f\n', n, p)  
end
```

```
n, my_pi =      6,  3.0000000000  
n, my_pi =     12,  3.1058285412  
n, my_pi =     24,  3.1326286133  
n, my_pi =     48,  3.1393502030  
n, my_pi =     96,  3.1410319509  
n, my_pi =    192,  3.1414524723  
n, my_pi =    384,  3.1415576079  
n, my_pi =    768,  3.1415838921  
n, my_pi =   1536,  3.1415904632  
n, my_pi =   3072,  3.1415921060
```