

1) Polar Coordinates

```
In [1]: 1 import cmath;
        2
        3 inp = complex(input())
        4 ans = complex(inp)
        5
        6 print(cmath.polar(ans)[0])
        7 print(cmath.polar(ans)[1])
```

5
5.0
0.0

2) Find Angle MBC

```
In [4]: 1 import math
        2
        3 AB = int(input())
        4 BC = int(input())
        5
        6 Hyp = math.sqrt(AB**2 + BC**2)
        7 Hyp = Hyp/2.0
        8 adj = BC/2.0
        9
       10 op = int(round(math.degrees(math.acos(adj/Hyp))))
       11
       12 op = str(op)
       13
       14 print(op+"°")
```

10
10
45°

3) Triangle Quest 2

```
In [5]: 1 for i in range(1,int(input()+1):  
        2     print(round((10**i-1)/(9))**2)
```

```
5  
1  
121  
12321  
1234321  
123454321
```

4) Mod Divmod

```
In [6]: 1 a = int(input())  
        2 b = int(input())  
        3 print(a//b)  
        4 print(a%b)  
        5 print(divmod(a,b))
```

```
10  
5  
2  
0  
(2, 0)
```

5) Power - Modpower.

```
In [7]: 1 a = int(input())  
        2 b = int(input())  
        3 m = int(input())  
        4 print(pow(a,b))  
        5 print(pow(a,b,m))
```

```
3  
4  
5  
81  
1
```

6) Integers Come In All Sizes

In [8]:

```
1 a = int(input())
2 b = int(input())
3 c = int(input())
4 d = int(input())
5 print(a**b + c**d)
```

```
9
29
7
27
4710194409608608369201743232
```

7) Triangle Quest

In [9]:

```
1 for i in range(1,int(input())):
2     print(int(i * 10**i / 9))
```

```
6
1
22
333
4444
55555
```