YinYang
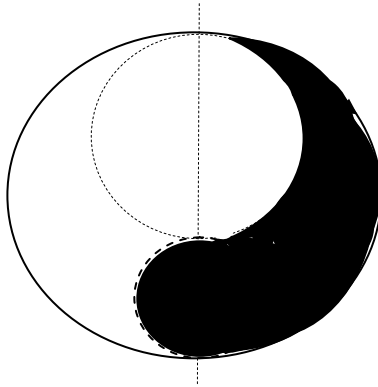**Input File: YinYangIn.txt**

The symbol shown below approximates the Chinese duality symbol Taijitu. It is comprised of an outer circle, which contains an upper and a lower inner circle inside of it. The vertical diameters of the three circles are collinear. The inner circles are tangent to each other and they are tangent to the outer circle. The black area of the symbol is call yin, and the white area is call yang. Given the radii of the outer circle and the upper-inner circle, calculate the area of the yin (black) and yang (white) areas of the symbol. Use 3.141592653589793 for the value of pi.

Inputs
The first line of input contains the number of Taijitu symbols to consider. This will be followed by one line of data per symbol that contains two integers: the radius of the outer circle followed by the radius of the upper-inner circle. The radii will be separated by one space.

Outputs
There will be one output per line that contains the yin area of the symbol followed by the yang area of the symbol each to three digits of precision. The outputs on a line should be separated by a space.

Sample inputs
2
10 6
12 2

Sample output
125.664 188.496
376.991 75.398