6.

I drew a ray from the given point and counted the number of the points where it intersects with the polygon. If the number is odd, it is inside the polygon, while if is even, it is outside. There’re some special conditions to be taken into consideration such as that the point is exactly on the edge or the ray just coincided with a vertex but does not go through the segment. The details are included in the codes as annotations.

========Input=======

10 (The number of the points)

10 (The number of the vertices of the polygon)

7 11 (Points’ coordinates)  
10 14  
11 4  
12 21  
16 3  
16 10  
17 4  
18 7  
18 17  
20 7

4 3 (Vertices’ coordinates)  
2 6  
3 12  
2 17  
5 20  
9 21  
14 19  
20 14  
18 3  
11 7

=======Output========

7 11 Inside

10 14 Inside

11 4 Outside

12 21 Outside

16 3 Outside

16 10 Inside

17 4 Inside

18 7 Inside

18 17 Outside

20 7 Outside