

Homework Problems

- Consider a 2-D Cartesian coordinate work space of $(-100, 100)$ to $(100, 100)$
- Input a point $P (x, y)$ and check if it is IN, ON or OUT of WS
- Input two points P and Q and check if a point A is on RIGHT, LEFT or ON the line PQ
- Circle problem, Triangle problem
- Given K , calculate the sum of the first K odd integers



Homework Problem # 1

- Consider a 2-D Cartesian coordinate work space (WS) of (x_{\min}, x_{\max}) to (y_{\min}, y_{\max})
- Input a point P (x, y) and check if it is IN, or OUT of WS
- $(x_{\min} < x)$ and $(x_{\max} > x)$
- $(y_{\min} < y)$ and $(y_{\max} > y)$
- Use logical operations for checking
- Write a pseudo-code



Homework Problem # 2

- Consider a 2-D Cartesian coordinate work space (WS) of (x_{\min}, x_{\max}) to (y_{\min}, y_{\max})
- Input point P (x_1, y_1) and Q (x_2, y_2) . Check if P and Q are in WS
- Input A (x, y)
- Considering a line from P to Q, check if A is on RIGHT or LEFT or ON the line PQ
- Write a pseudo-code



Homework Problem # 3

- Consider a 2-D Cartesian coordinate work space (WS) of (x_{\min}, x_{\max}) to (y_{\min}, y_{\max})
- Input point O (x_c, y_c) and r –radius of a circle with O as the center.
- Input a point A (x, y)
- Check if A is INSIDE the circle or OUTSIDE the circle or ON the circle
- Write a pseudo-code



Homework Problem # 4

- Consider a 2-D Cartesian coordinate work space (WS) of (x_{\min}, x_{\max}) to (y_{\min}, y_{\max})
- Input three vertex points of a triangle A $(-x, -y)$, B $(x, -y)$ and C $(0, y)$.
- Input a point P (x_1, y_1)
- Check if P is INSIDE the triangle or OUTSIDE the triangle or ON the periphery of the triangle
- Write a pseudo-code



Homework Problem # 5

- Input an integer K
- Enumerate and print the first K odd integers.
- For example, if $K = 5$, the answer will be 1, 3, 5, 7, 9
- Write a pseudo-code

