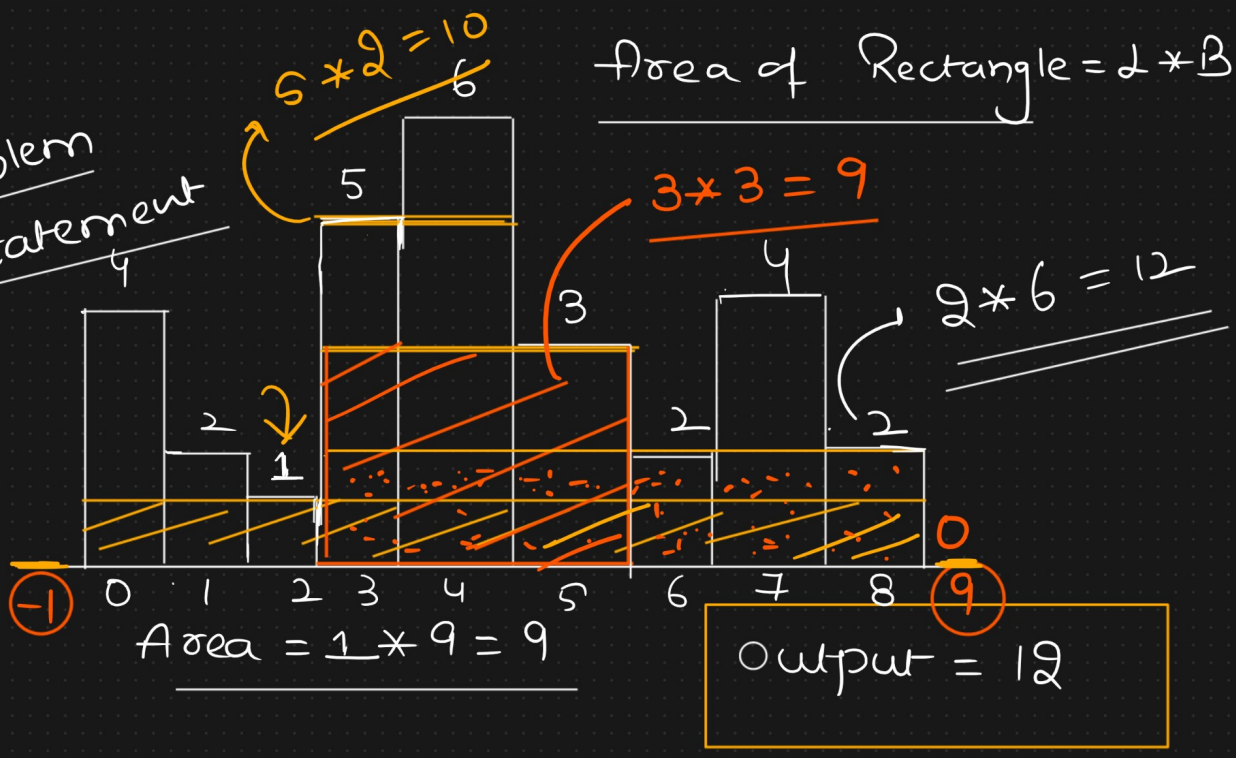
PW SKILLS

0	1	2	3	4	5	6	7	8	9
4	2	1	5	6	3	2	4	2	-1

Height of building

Problem Statement

Area of Rectangle = L * B



Area = 1 * 9 = 9

Output = 12

Each building Width = 1

Approach

1) Previous smaller
   - not available = -1
   - available = index
2) Next- smaller
   - not available = n
   - available = index
3) Width = next smaller - Previous smaller - 1
4) Area = Height * Width

max

Approach

$n = 9$

	0	1	2	3	4	5	6	7	8	9
Height →	4	2	1	5	6	3	2	4	2	0

	0	1	2	3	4	5	6	7	8
Previous smaller	-1	-1	-1	2	3	2	2	6	2	

	0	1	2	3	4	5	6	7	8
Next-smaller	1	2	9	5	5	6	9	8	9	

	0	1	2	3	4	5	6	7	8
Width	1	2	9	2	1	3	6	1	6

Width = next_Smaller(i) − prev_Smaller(i) − 1

	0	1	2	3	4	5	6	7	8
Area	4	4	9	10	6	9	12	4	12

↳ Height × Width

Final Result → max(Area) = 12