In-class Question 1: Going left or right first?

- Answer: left (in initial coordinate system)
- Why: The robot records the open directions the first time it is in a new square, then stores the directions with global directions (N, S, E, W instead of left-right); and its initial sequence is straight, left, right.



In-class Question 2: How to calculate arc length?

d is distance A to B = sqrt(dx² +dy²) α is angular change from A to B = atan2(dy,dx) - robot.phi From drawing: $sin(\alpha/2) = (d/2) / r$ solving for r: $r = d / (2 * sin(\alpha/2))$ We know for arc s: $s = r * \alpha$ (assuming α in range [0..2 π] otherwise first convert from degrees to rad)