

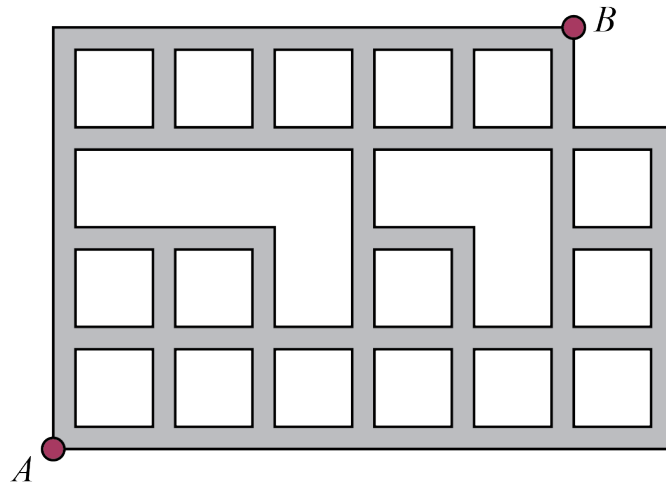


Problem of the Week

Problem E

No Straight Answers

An autonomous wheeled delivery robot is being tested in a city district. It must navigate along the streets from a central warehouse (marked A) to a customer's house (marked B), as shown.



Due to a glitch in its guidance sensors, the robot is currently unable to process continuous, straight-line travel through intersections. At every intersection it reaches, the robot's programming forces it to make either a 90° left turn or a 90° right turn; it can never continue straight through an intersection. Furthermore, to prevent the robot from getting stuck in an infinite loop, its safety protocols dictate that it can never travel along the same street segment more than once.

If moving from one intersection to the next one counts as one travel segment, what is the minimum number of segments needed for the robot to successfully reach the house?