Mathematics Problem of the Week
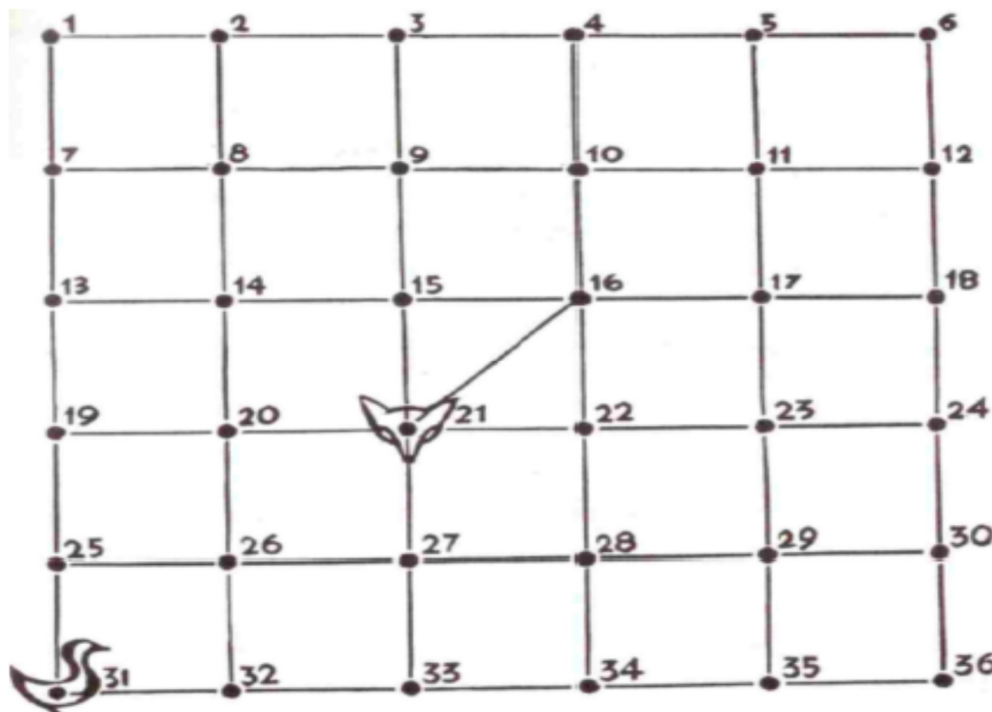
Fantastic Mr. Fox and the Goose

Boggis, Bunce, and Bean one fat, one short, one lean.
Those horrible crooks so different in looks are nonetheless equally mean.

Mr. Fox has been able to feed his family by stealing fowl from the farmhouses of Boggis, Bunce and Bean. He thinks of game schemas and plots to outwit the farmers. The scheming game shown above involves capturing a goose. It must be played on the board and each animal gets to make a move alternately. A move consists of traversing through adjacent dots along a solid black line. Mr. Fox wants to capture the goose by moving onto the spot occupied by the goose. The goose tries to prevent this. If Mr. Fox is able to capture the goose in ten moves, then his family gets to eat a succulent goose. If not then the cackling of the goose is able to wake up the farmers and Mr. Fox will get caught.

Determine if Mr. Fox will be successful in capturing the goose. Present your solution in a tabular form indicating the alternate moves of Mr. Fox and the goose.