Rules:

Players take it in turns to move.

Each player uses vector notation to describe their move.

Each player starts off from rest at the start dot, and the winner is the first player to arrive at the finish (driving around the race track, or avoiding the pits).

Each horizontal and vertical component **cannot differ by more than two** from the previous move.

For example, after a move of $\begin{pmatrix} 0 \\ 2 \end{pmatrix}$ the following moves are possible:

$$\begin{pmatrix} -2 \\ 0 \end{pmatrix} \quad \begin{pmatrix} -1 \\ 0 \end{pmatrix} \quad \begin{pmatrix} 0 \\ 0 \end{pmatrix} \quad \begin{pmatrix} 1 \\ 0 \end{pmatrix} \quad \begin{pmatrix} 2 \\ 0 \end{pmatrix}$$

$$\begin{pmatrix} -2 \\ 1 \end{pmatrix} \quad \begin{pmatrix} -1 \\ 1 \end{pmatrix} \quad \begin{pmatrix} 0 \\ 1 \end{pmatrix} \quad \begin{pmatrix} 1 \\ 1 \end{pmatrix} \quad \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$

$$\begin{pmatrix} -2 \\ 2 \end{pmatrix} \quad \begin{pmatrix} -1 \\ 2 \end{pmatrix} \quad \begin{pmatrix} 0 \\ 2 \end{pmatrix} \quad \begin{pmatrix} 1 \\ 2 \end{pmatrix} \quad \begin{pmatrix} 2 \\ 2 \end{pmatrix}$$

$$\begin{pmatrix} -2 \\ 3 \end{pmatrix} \quad \begin{pmatrix} -1 \\ 3 \end{pmatrix} \quad \begin{pmatrix} 0 \\ 3 \end{pmatrix} \quad \begin{pmatrix} 1 \\ 3 \end{pmatrix} \quad \begin{pmatrix} 2 \\ 3 \end{pmatrix}$$

$$\begin{pmatrix} -2 \\ 4 \end{pmatrix} \quad \begin{pmatrix} -1 \\ 4 \end{pmatrix} \quad \begin{pmatrix} 0 \\ 4 \end{pmatrix} \quad \begin{pmatrix} 1 \\ 4 \end{pmatrix} \quad \begin{pmatrix} 2 \\ 4 \end{pmatrix}$$

Challenge a friend to a race.

Choose your starting positions and agree what the penalty will be for going off the track, or into a pit.

Who can get to the finish the fewest moves?