$$M^1 = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$$

$$M^2 = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$$

$$M^3 = M^1$$

$$M^4 = M^2$$

$\vdots$