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\documentclass{article}
\usepackage[utf8]{inputenc}
\usepackage{tikz}

\begin{document}

\begin{tikzpicture}

%\draw (0,0) rectangle (4,4);
%\draw (0,0) parabola (4,4);
%\draw (0,0) .. controls (0,4) and (4,0) .. (4,4);
%\draw[red,thick,dashed](2,2) circle (3cm);
%\draw (2,2) ellipse (3cm and 1cm);
%\draw (3,0) arc (0:75:3cm);

\draw[step=1cm,gray,very thin] (-1.9,-1.9) grid (5.9,5.9);

\draw[thick,->] (0,0) -- (4.5,0) node[anchor=north west] {x axis};
\draw[thick,->] (0,0) -- (0,4.5) node[anchor=south east] {y axis};

\foreach \x in {0,1,2,3,4}
    \draw (\x cm, 1pt) -- (\x cm, -1pt) node[anchor=north] {$\x$};
\foreach \x in {0,1,2,3,4}
    \draw (1pt,\x cm) -- (1pt,\x cm) node[anchor=west] {$\x$};

\end{tikzpicture}

```