



```

\begin{tikzpicture}
\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 \y in {0,1,2,3,4}
  \draw (1pt,\y cm) -- (-1pt,\y cm) node[anchor=west] {$\y$};
\end{tikzpicture}

```