

- Find the gradient of $T(x, y) = \sin(x) \sin(y)$.
- Use Mathematica to plot the contours of $T(x, y)$ in the range $-2 \leq x \leq 2$ and $-2 \leq y \leq 2$. Label the x-axis and the y-axis.
- Pick three points on different contours and draw the gradient of T at these points.
- Is the gradient perpendicular to the contours and pointing towards the steepest ascent of $T(x, y)$?