$$\left(\frac{\partial}{\partial x}\right)^{\mathrm{T}} = ?$$

## What is the transpose of a derivative?

## And why should I care?

Find out in 18.303, Fall 2010

Linear Partial Differential Equations: Analysis & Numerics

• Learn to view partial differential equations (PDEs) (examples: waves and diffusion) just like matrices

• How do 18.06 concepts like **transposes**, **eigenvalues**, and **null spaces** help us to understand linear PDEs?

• How do you turn PDEs into ordinary matrices to solve them on a computer?

Prerequisite: 18.06 or equivalent S. G. Johnson, math.mit.edu/~stevenj/18.303