

### Definition 0.0.1: Nablaräkning

Om  $g = g(x, y, z)$  är reellvärd och  $F = F(x, y, z)$  är ett vektorfält:

- $\text{grad}g = \nabla g = \left( \frac{\partial g}{\partial x}, \frac{\partial g}{\partial y}, \frac{\partial g}{\partial z} \right)$
- $\nabla \cdot F = \text{div}F = \frac{\partial P}{\partial x} + \frac{\partial Q}{\partial y} + \frac{\partial R}{\partial z}$
- $\nabla \times F = \text{rot}F = \text{curl}F = \left( \frac{\partial R}{\partial y} - \frac{\partial Q}{\partial z}, \frac{\partial P}{\partial z} - \frac{\partial R}{\partial x}, \frac{\partial Q}{\partial x} - \frac{\partial P}{\partial y} \right)$