

## General Stuff

- Office Hours
  - T: 12:30 - 1:30, Th: 10 - 11
- Quiz 4 on Today (3/11)
- Topics include probably 5.5 and chapter 4 material. Probably 7.1 as well.
  - 1 problem
  - 15 minutes to take quiz
  - 5 minutes to upload to gradescope
  - 11:15 - 11:40 questions before quiz
  - 11:40 - 12:00 quiz
  - 12:00 - 12:05 uploading
- Lab after quiz today from 12:20 - 1:10

# Div, Grad, Curl Table

1. Let  $F(x, y, z) = (xz, e^y, x + y + z)$ . (a) Which of the following are well-defined,  $\nabla \cdot (\nabla \times F)$  or  $\nabla \times \nabla F$ . (b) Find  $\nabla \times F$  and  $\nabla \cdot F$ .

2. Let  $F(x, y, z) = (2xy + z \cos(x), x^2, \sin(x))$ . Compute out the curl and show that  $\nabla \times F = 0$ . Explain why  $F$  has a potential function  $\phi(x, y, z)$ .