

# **Office Hours**

**Hours For HW help:**

**Wed 11-12 – 254 CB**

**Fri 12-1 – 392 CB**

**Normal hours in 435K CTB:**

**Mon 12:30-2:30**

# Groups and Vector Spaces

- They are ways of describing mathematical structures with specific properties.
- Groups are more general than vector spaces
  - A vector space is an abelian group with additional structure (scalar multiplication)
- [https://en.wikipedia.org/wiki/Group\\_\(mathematics\)#First example: the integers](https://en.wikipedia.org/wiki/Group_(mathematics)#First_example:_the_integers)
- We really only care about  $SO(2)$ ,  $SE(2)$ ,  $SO(3)$ ,  $SE(3)$  groups in this class.