

### **Orientation mechanisms**

- Proprioceptive cues
- Beacons
- Vectors/distances/directions of at least two landmarks
- Snapshot matching
- Geometric shape of environment
- Sun/star/sky compass plus one of the above

### **Navigation mechanisms**

- Dead reckoning/path integration
- Learning a route (response learning)
- Snapshot library with vectors or route information
- Cognitive map

### **Cognitive maps**

What needs to be shown to demonstrate that an animal has a 'cognitive map'?

Do bees/rats/? have cognitive maps?