

# Midterm review

# Protocols and layers

|   |             |
|---|-------------|
| 5 | Application |
| 4 | Transport   |
| 3 | Network     |
| 2 | Link        |
| 1 | Physical    |

What is the function of each layer?

Example protocols in each?

What are the (dis)advantages of layering?

# Transport layer

1. What abstractions are provided by UDP and TCP?
2. What the key elements of TCP flow control?
3. What is a key property of AIMD control?
4. How does TCP figure out the right window size?

# Network layer

- How do we circumvent address space exhaustion in the Internet?
- How does traceroute work?
- Name some techniques used to scale routing

# Routing

- What problems are distance vector and link state routing solving?
  - Do they compute identical paths?
  - What are the key differences between the two?
- How does BGP differ from shortest-path routing?
- How is policy expressed in BGP?
- What is ECMP and how is it implemented?