

Exercise: Prove that s - t connectivity is not expressible in FOL over $\tau = \text{Graph}_{s,t}$.

Reminder $\text{Graph}_{s,t}$ has constants s, t and binary relation E .

$G = (V, E, s, t)$ is s - t connected if there is a path from s to t .

Hint on next page, but try without first...

Hint:

- 1) Proof by contradiction
- 2) Use compactness