Consider the set F of the following functional dependencies on attributes A, B, C, D, E, F:

A → B

A → C

CD → E

CD → F

B → E

**Problem 1:** Prove CD → EF by applying Armstrong’s Axioms, i.e., you can use only reflexivity, transitivity, and augmentation

Ta có

* CD => E
* CD => F
* CD => EF (Luật hợp)

**Problem 2:** Prove AD → EF by repeatedly applying Armstrong’s Axioms.

Ta có

* A => C
* CD => EF (Chứng minh trên)
* AD => EF (Luật bắc cầu giả)

**Problem 3:** Prove that BC → F cannot be derived from F.

**Problem 4:** Is AD a candidate key of the table R(A, B, C, D, E)?

**Problem 5:** Is AB a candidate key of the table R(A, B)?