Question 1: Consider Relation R with schema ABCD and functional dependencies F:

BD ⟶ AC
AB ⟶ D
AC ⟶ B

Which closure of the set of attributes is correct?

$C_F\{(A,\ B)\}\ =\ \{A,\ B,\ C,\ D\}$

Question 2: Which FDs equivalencies below follows the **transitive rule**?

AB ⟶ CD
CD ⟶ EF
EF ⟶ H
Then AB ⟶ H (by Transivity)

Question 3: Given the relation Patient as below:

```
Patient (id, name, address, doctor, doctorOffice, diagnosis, priority)
```

and Functional Dependencies as the following:

```
id → name, address, doctor, diagnosis
doctor → doctorOffice
diagnosis → priority
```

What is the closure of set of attributes {id, doctor} ?

$\{id,\ doctor\}^+\ =\ \{id,\ name,\ address,\ doctor,\ doctorOffice,\ priority,\ diagnosis\}$

Question 4: Given the following relation, which one is a **trivial FD?**

```
Patient(id, name, address, doctor, doctorOffice, diagnosis, priority)
```

id, name ⟶ id

Question 5: Which description is correctly describing an anomaly situation on the relation Movie with the following schema?

```
Movie (year, title, actress, actor, length, genre, actressAddress, actorAddress)
```

Insert Anomaly: We cannot have address of an actor that we do not have a movie information for