

Question 1:

1. Rational model:
 1. Columns are attributes, so modifying and retrieving information of the entity would be easy to do.
 2. Keys are defined explicitly for different uses, therefore, it is possible to connect multiple models together, and access data from another model.
 3. Names of the columns are unique, as a result, there will be no duplicate information in the same row.
2. Rational database management system:
 1. Every R.D.M.S must have a domain constraint, therefore data type error can be prevented.
 2. All the values in the same column have the same type, so they would be comparable, and sortable.
 3. The sequence of column does not matter, so there are less restrictions.

Question 2:

A:

1. Assuming that if two players with same firstName and last name cannot be drafted to the league in the same year, (firstName, lastName, drafted) is a candidate key because first name, last name and drafted cannot be the super-key due to that there can be many players with same first name, last name and drafted.
2. Assuming the playIDs are unique, it would be the candidate key in the relation players.
3. If the first names, and last name, and weight are unique in the players relation. The key of (firstName, LastName, weight) is the candidate key.

B:

Referential constraint:

The key playerId shows in both relational tables and is used to as a reference to access the data in the another table, so playerId cannot be identical in another table.

Key constraint:

The key playerId is also used to uniquely identify players in the relation players.

Entity constraint: the key PlayerID is the primary key in the relation players, so it cannot be null.