Problem 1 (b)

Table R has a primary A and contains 17,000 tuples. Table S has a primary key B and an attribute C, which is a foreign key referencing R. Table S contains 3,457 tuples. How many tuples will $R \bowtie_{R.A=S.C} S$ contain?

Answer: 3,457 tuples. The join will only contain tuples where the value of the A column is equal to the value of the C column in S.

Problem 2 (a)

Write SQL commands to create all three tables. (Make sure your SQL commands include ALL necessary information.)

```
CREATE TABLE Musicians {
    Id INT PRIMARY KEY,
    Name CHAR(20),
    Country CHAR(20)
}
CREATE TABLE CD {
    Id INT PRIMARY KEY,
    Musician INT,
    Title CHAR(20),
    Year INT,
    Label CHAR(20),
    UNIQUE(Musician, Title),
    FOREIGN KEY(Musician) REFERENCES Musicians(Id)
}
CREATE TABLE Songs {
    CD INT,
    TrackNo INT,
    Title CHAR(20),
    DURATION TIME,
    PRIMARY KEY(CD, TrackNo),
    FOREIGN KEY(CD) REFERENCES CD(Id)
}
```