**CSCE 520 – Homework 3**

[**2.4.7**] Suppose relations R and S have n tuples and m tuples, respectively. Give the minimum and maximum number of tuples that the results of the following expressions can have.



Minimum # = greatest of the two sizes, m and n

Maximum # = n + m



Minimum # = smallest of the two sizes, m and n

Maximum # = 0



Minimum # = m \* n

Maximum # = 0



Minimum # = n

Maximum # = 0

[**2.5.1 (a,b,c)**]



Constraint: σ speed < 2.00 AND price > 500 = 0

Violations: Model 1011



Constraint: σ screen < 15.4 AND (σ hd > 100 OR σ price < 1000) = 0

Violations: Model 2004



Constraint:

ℼ maker (σ type=PC(Product)) ∩ ℼ maker (σ type=Laptop(Product)) = 0

Violations: Maker A, Maker B, Maker E