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Section 1B

Homework 1

1.

A	B	C
4	5	6
1	2	6
2	5	4

2.

A	B	B	C	D
1	2	2	4	6
1	2	8	6	8
1	2	7	5	9
3	4	2	4	6
3	4	8	6	8
3	4	7	5	9
5	6	8	6	8

3.

a. $\pi_{customer-name}(\sigma_{branch-name=Region12}Account)$

b. $\pi_{customer-name}(Customer \bowtie_{Customer.city \neq AB.city} (Branch \bowtie Account))$

c. $\pi_{branch-name}Branch - \pi_{branch-name}(Branch \bowtie Account)$

d. $\pi_{customer-name}Customer - \pi_{customer-name}(\sigma_{branch-name=Region12}Account)$

e. $A = (\pi_{customer-name, account-number}Account) \times (\sigma_{city=Los\ Angeles}Branch)$

$B = (Account \bowtie (\sigma_{city=Los\ Angeles}Branch))$

$\pi_{customer-name}B - \pi_{customer-name}(A - B)$

f. $A = (Account \bowtie_{customer-name=customer-name \wedge account-number \neq account-number} Account)$

$\pi_{customer-name}(Account) - \pi_{customer-name}(A)$

$$4. \rho_{S(sid', GPA')}(Student)$$

$$\pi_{sid}(Student) - \pi_{sid}(Student \bowtie_{Student.GPA > S.GPA'} S)$$