

52

Some properties of UNION, INTERSECT, and DIFFERENCE

- Notice that both union and intersection are commutative operations; that is
 - $R \cup S = S \cup R$, and $R \cap S = S \cap R$
- Both union and intersection can be treated as n-ary operations applicable to any number of relations as both are *associative* operations; that is
 - $R \cup (S \cup T) = (R \cup S) \cup T$
 - $(R \cap S) \cap T = R \cap (S \cap T)$
- The minus operation is not commutative; that is, in general
 - $R S \neq S R$

53