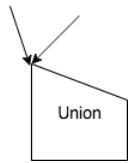
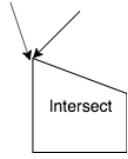
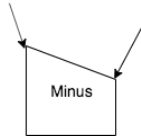
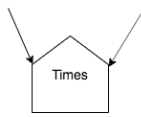


Primitive Binary Set Operator Framework

Circumstance		Inputs	Result Relation Name			Result Relation Structure		
operator	symmetry		base	row modifier	column modifier	identifier	width	Height
Union 	Symmetric	Same base, same number of columns	no change	none	none	no change	no change	At most number in A plus Number in B (duplicate rows removed)
Intersect 	Symmetric	Same base, same number of columns	no change	none	none	no change	no change	At most number in A plus Number in B, usually fewer
Minus 	Non- symmetric	Same base, same number of columns	no change	none	none	no change	no change	At most number in A, usually fewer
Times 	Symmetric	Same base, Different Base, Same Relation	A- B Pair	from input bases	Rename when B has duplicate column names to A	all identifying columns from A and B	number of columns in A plus number of columns in B	Number in A times number in B

Notes

With 2 input relations, A and B, we introduce new considerations:

- A new notion of the *symmetry of the operator*. This is an indicator of whether the order of input relations A and B has a difference on the result relation's contents.
- We also begin now to consider the base of each input relation A and B: are they
 1. the same base,
 2. different bases,
 3. the same relation.

We do not yet consider what columns are 'worked on' with these set operators, because it is always all of them. This why we call these 'primitive' binary operators.