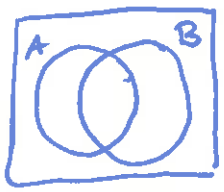
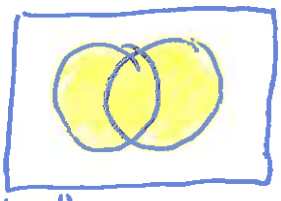


union

$A \cup B$

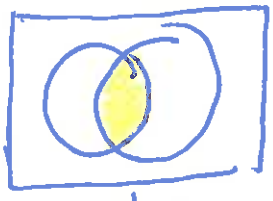


"or"

everything in A or B or both

intersection

$A \cap B$

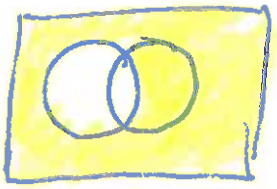


overlap

things in A and B both

complement

$\bar{A}$

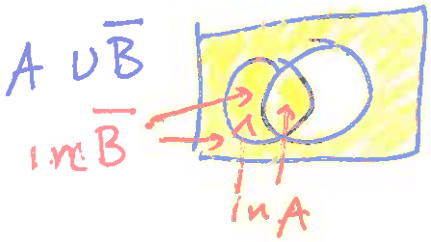


everything except A

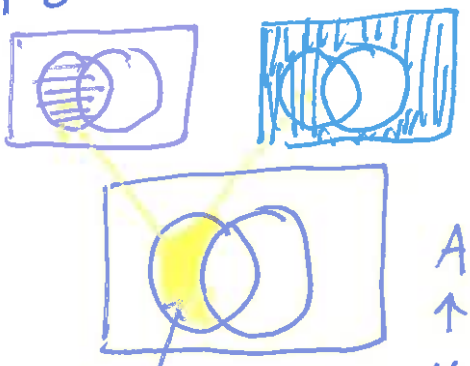
(not in A)

$A' = \bar{A} = A^c = A^*$

$A \cup \bar{B}$



$A \cap \bar{B}$



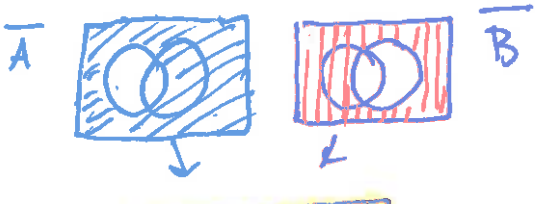
in both

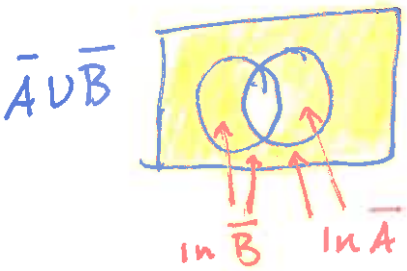
A-B

everything in A

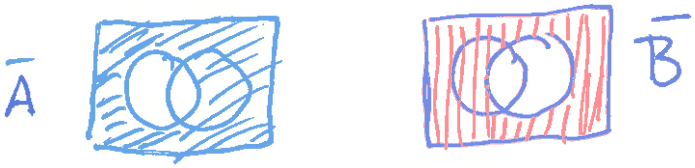
erase if in B

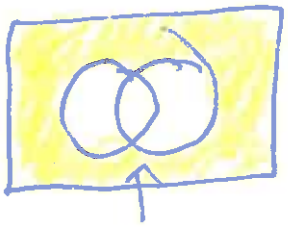
$\bar{A} \cup \bar{B}$





$\bar{A} \cap \bar{B}$

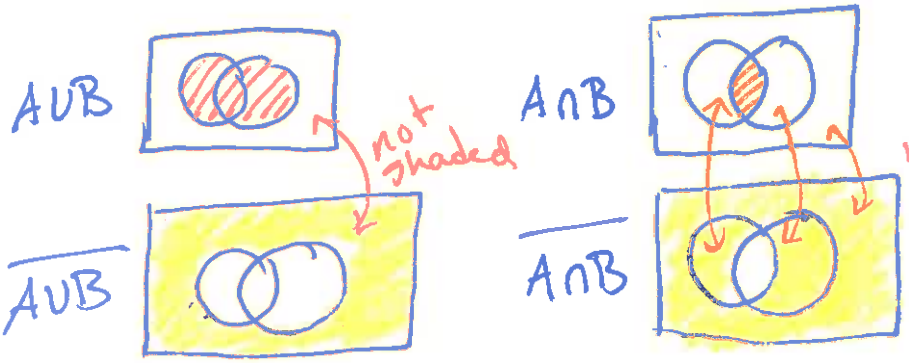




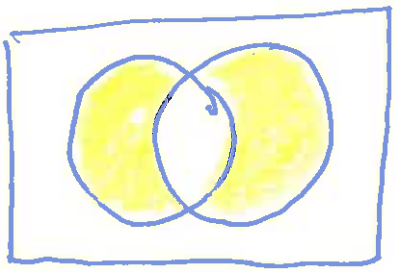
$\bar{A} \cap \bar{B}$

in both

$\overline{A \cup B}$ $\overline{A \cap B}$



not shaded parts in $A \cap B$ get shaded in $\overline{A \cap B}$



$(A \cup B) - (A \cap B) =$ ~~$(A \cup B) \cap (A \cap B)$~~

erase middle

$(A \cap \bar{B}) \cup (\bar{A} \cap B)$

left side right side

how many A? 10 how many B? 11

how many in $A \cup B$? 17