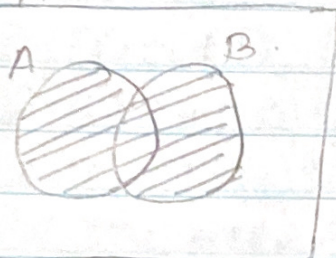
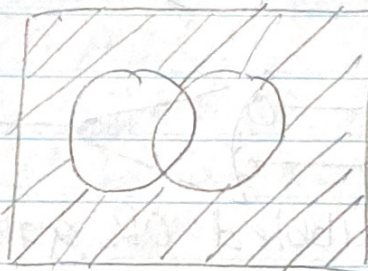


12. Draw Venn-Diagram to illustrate each of the two laws known as "De Morgan's law"

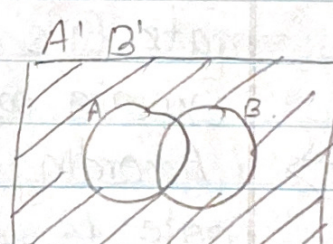
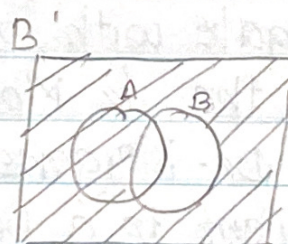
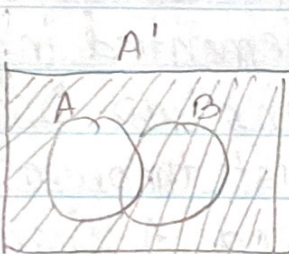
$$A + B$$



$$(A + B)'$$



$$A' B'$$



13. Convert the following Boolean expression into standard SOP form?

$$AB'C + A'B' + ABC'D$$

$$= AB'C(1) + A'B'(1) + ABC'D$$

$$= AB'C(D + D') + A'B'(1 + C')(D + D') + ABC'D$$

$$= AB'CD + AB'CD' + A'B'(C'D + C'D + CD' + CD) + ABC'D$$

$$= AB'CD + AB'CD' + A'B'C'D + A'B'CD + A'B'CD' + A'B'CD + ABC'D$$

(7 min. terms)