Let U = {1,2,3,4,5,6,7} A = {1,3,5,7} B = {1,2,3} C = {2,3,4,5,6}

What are these sets?

2. A ⋂(BUC)

we use definition of union, interception

{1,3,5,7}⋂({1,2,3}U{2,3,4,5,6})=| union have elements that arise at least at one of sets|={1,3,5,7}⋂({1,2,3,4,5,6})=| interception - elements that belongs to both set|

={1,3,5}

4.(A⋂B)U (A⋂C)

By the formula (A⋂B)U (A⋂C)=A⋂(BUC) but from the previous it is equal to { 1,3,5 }.

6. C'⋂(AUB')

X'=U/X - elements that doesnt belongs to X

so C'⋂(AUB')=({2,3,4,5,6}')⋂({1,3,5,7}U{1,2,3}')={1,7}⋂({1,3,5,7}U{1,2,3}')={1,7}⋂({1,3,5,7}U{4

={1,7}⋂{1,3,4,5,6,7}={1,7}

8.(C'⋂ A)U(C'⋂B')

From the formula (C'⋂ A)U(C'⋂B')=C'⋂(AUB')={1,7}

10. (A⋂B⋂C)'

({1,3,5,7}⋂{1,2,3}⋂{2,3,4,5,6})'=({1,3})'={2,4,5,6,7}

12. (B U C)' ⋂ A= ({1,2,3} U{2,3,4,5,6})' ⋂ {1,3,5,7}=({1,2,3,4,5,6})' ⋂ {1,3,5,7}={7}⋂ {1,3,5,7}={7}