Key

Notes 2.4 Set Operations with 3 Sets

Inside ( ) first

Given: U={a,b,c,d,e,f,}, A={a,b,c,d}, B={a,b,d,f}, C= {b,c,f}

1) A∪(B∩C) : {a b c d} ∪ {b, f} = {a, b, c, d, f}

2) (A∪B)∩(A∪C) : {a, b, c, d, f} ∩ {a, b, c, d, f}

: {a, b, c, d, f}

3) A∩(B∪C') : {a, b, c, d} ∩ {a, b, d, e, f} : {a, b, d}

a b c d ∩ (a b d f ∪ a d e)

a b c d ∩ a b d e f

{a, b, d}

4) (A'∩B)∪(C'∩B')

(e f ∩ a b d f) ∪ (a d e ∩ c e)

{f} ∪ {e}

{e, f}

5) A'∩(C∪B')

(e f) ∩ (b c f ∪ c e)

(e f) ∩ (b c e f)

{e, f}