	Topic: Date: Page No.:
	+ WORKSHEET NO: 4 (5-4) + & solutions
ON: 1-	Proof of Distribute law
Solution	(1) T.P AU(BNC) = (AUB) n(AUC)
	let x E AU(BAC)
	=> MEA or MEB and MEC) => (MEA or MEB) and (MEA or MEC)
	= (MEA or MEB) and (MEA or MEC) = MEAUB and ME (AUC)
	=> AU(BAC) C (AUC) -> AU(BAC) C (AUB) AUC) (i)
l	Lut re (AUB) n (AUC)
	=> NE (AUB) and NE (AUC) => (NE A or NEB) and (NEA or NEC) => NEA and (NEB or NEC)
	=> x EA and x E (BUC)
	= YEAN(BUC).
	=> (AUB) n (AUC) = An (BUC) (7)
	fun (1) & (2) AU(BO() = (AUB) O(AUC) prond
(ii)	T.P An(Bu() = (AnB) u(Anc) po yourself (same as part (i))
	The same as fully

workshut & solution [5-4] ONZ - by A and B & Sets of AUX = BUX and Anx = Bnx = f. Show that A=B Sduhar we hay AUX=BNX= ANX= BNX= & Cornely AUX = BUX

An(AUX) = An(BUX) $\frac{1}{2} \left(\frac{AnA}{AnA} \right) \left(\frac{Anx}{Anx} \right) = \left(\frac{AnB}{AnB} \right) \left(\frac{Anx}{Anx} \right) \\
= \frac{1}{2} \left(\frac{AnB}{AnB} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) \\
= \frac{1}{2} \left(\frac{AnB}{AnB} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) \\
= \frac{1}{2} \left(\frac{AnB}{AnB} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) \\
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= \frac{1}{2} \left(\frac{AnB}{Anx} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) \\
= \frac{1}{2} \left(\frac{AnB}{Anx} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) \\
= \frac{1}{2} \left(\frac{Anx}{Anx} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx} \right) \\
= \frac{1}{2} \left(\frac{Anx}{Anx} \right) \left(\frac{Anx}{Anx} \right) - \left(\frac{Anx}{Anx}$ Main conidu AUX - BUX

BA(AUX) - BA(BUX) => (BNA) U(BNX) = (BNB) U(BNX) => (ANB) U(4) = BU & -- {91un BN x = &y => AnB = B -- (2) form (1) (2) $A = B \quad \text{proved} \quad \text{Are}$ ONS: 3+ snow fact ADB = ADC need not imply B=C Solution 910m ANB= ANC huy ANB = { 2,34 To prove B + C and An (= {2,3}) Let $A = \{1, 2, 3\}$ $B = \{2, 3, 4, 5\}$ and $C = \{2, 3, 7, 8\}$ => ANB = ANC But Clearly B +C Any (CLASSTIME

	Warkshut & solution [5-9]
	Topic :
ONE 4	*(i) Snow that AU (AnB) = A
Josepha	we have AU(AnB)
	= (AUA) n(AUB) { dustribute proply
	= An(AUB)
	of cource all elements y A are always present in (AUB): A is of subset y ADB A C (AUB)
	in (AUB): A is a subset of An B
	\rightarrow $A \subset (A \cup B)$
	· · An (AUB)
	= A ploned
C	
	i) Show that An (AUB) = A
Sorul	no we have
	= (AnA) U(AnB) } dashbutu lawy
	= (ATTA) (ATTB) { all mouth lawy
	= A U(Ano)
0	1 Course all element y (ADB) are always
	present in set A
	f (course all elements of (ADB) are always present in set A :- (ADB) is a Subset of A
	i-e (ANB) CA
District Control	
	·· AU(AMB)
	= A proof
6	
ON5+	Find Sels An B and C Such trad
	Arb, Brc and Arc are non-emply
	sets and Anbroc = of
The second second	

(CLASSTIME)

Warkshert & Solution 15-4) Sluton let A= { 1,24 B= {213 4 C= {1,34 ADB= 124 + 4 Bn (= 134 +4 Anc= liy + 4 but Anone = & AN On 6 Nilsnow part (ADB) U(A-B) -A (Til Snow frat AU(B-A)= AUB Solution (i) Taking L-H-S
(ADB) U(A-B) = (AnB) U(AnB') --- {: A-B = AnB'} = An (BUB') --- { des tobute prop = An U --- f : AUA'=U G = A = RN LMS AU(B-A) (Fis) = AU (BnA') --- { dos brown property = (AUB) n(AUA) = (AUB) NU Si all element of (AUB)
au always Present in One
[CLASSTIME] Set 1 - AUB = Rhi

	Workshut & Solution [54]
	Topic:
	IP C-B= A
	Taking L-HS C-B
	Taking L-hs C-B = (AUB)-B {siven AUB=cy
	= (AUB) NB' 1: A-B= ANB'
	= (AnB') v (BNB') { des fibutin peoply
	= (Ans') v d
	= ANB' {: AU = A4
	= ANB' \ AU \ - A \ A \ A \ A \ A \ A \ A \ A \ A \
	but we are green Anis- of
	but we are grun An B= ¢ 1-e No rommon element blw A & B
	=> A-B = A Plond
0.1	
CA T.	* Show (AUB) - (ADB) = (A-B) U (B-A) LMy (AUB) - (ADB)
Solyna	EN (AUB) - (ADB)
	= (AUB) n(ANB)' {-: A-B-ANB'}
	1 - A D = AIIBY
	= (AUB) n(A'UB') { demangain's lawy
	((AUB) AB) ((AUB) AB) (databusu lawy
=/(Ana 1 v (Bna1) V ((ADR)) ((ADR))
6	Anai) U (Bnai)) U ((AnBi) U(BnBi)) {dustabutive
=	(4 v (BnA')) v (AAB') v4)
=	(e \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	$= (B-A') \cup (AnB')$ $= (B-A) \cup (A-B) = (A-B) \cup (B-A) \text{ proved}$ (CLASSTIME)
	= (B-A) U (A-B) = (A-B) U(B-A) proved
	(CLASSTIME)