

1.

A	B	$A \vee B$	$A \rightarrow B$	$[(A \vee B) \leftrightarrow B]$	$A \rightarrow B \rightarrow [(A \vee B) \leftrightarrow B]$
T	T	T	T	T	T
T	F	T	F	F	T
F	T	T	T	T	T
F	F	F	T	T	T

2.

A	B	$(A \wedge B)$	A'	B'	$(A' \wedge B')$	$(A \leftrightarrow B)$	$(A \wedge B) \vee (A' \wedge B')$	$(A \leftrightarrow B) \rightarrow (A \wedge B) \vee (A' \wedge B')$
T	T	T	F	F	F	T	T	T
T	F	F	F	T	F	F	F	T
F	T	F	T	F	F	F	F	T
F	F	F	T	T	T	T	T	T

3.

A	B	C	$A \rightarrow C$	$B \rightarrow C$	$(A \rightarrow C) \wedge (B \rightarrow C)$	$A \vee B$	$A \vee B \rightarrow C$	$(A \rightarrow C) \wedge (B \rightarrow C) \rightarrow (A \vee B \rightarrow C)$
T	T	T	T	T	T	T	T	T
T	T	F	F	F	F	T	F	T
T	F	T	T	T	T	T	T	T
T	F	F	F	T	F	T	F	T
F	T	T	T	T	T	T	T	T
F	T	F	T	F	F	T	F	T
F	F	T	T	T	T	F	T	T
F	F	F	T	T	T	F	T	T

4.

A	B	C	C'	A'	(A->B)	(B->C)	[A->(B->C)]	(A->B)^(A->(B->C)]	(A->B)^(A->(B->C)]^C'	(A->B)^(A->(B->C)]^C'->A'
T	T	T	F	F	T	T	T	T	F	T
T	T	F	T	F	T	F	F	F	F	T
T	F	T	F	F	F	T	T	F	F	T
T	F	F	T	F	F	T	T	F	F	T
F	T	T	F	T	T	T	T	T	F	T
F	T	F	T	T	T	F	T	T	T	T
F	F	T	F	T	T	T	T	T	F	T
F	F	F	T	T	T	T	T	T	T	T