

b) Line 2: $(\neg(\phi \& \neg\psi) \rightarrow (\neg\psi \rightarrow \neg\phi))$

1	0	0	1	1	0	1	1	0	1
0	1	1	1	0	1	1	0	0	0
1	0	0	0	1	1	0	1	1	1
1	0	0	1	0	1	0	1	1	0

↑
tautology *don't prove unless asked*

boc) Line 6: $((\neg\psi \rightarrow \neg\phi) \& (\neg\phi \vee \psi)) \rightarrow (\phi \rightarrow \psi)$

0	1	1	0	1	1	0	1	1	1	1	1
0	1	1	0	1	1	1	0	1	1	0	1
0	1	1	0	0	0	1	0	0	1	1	1
0	1	1	0	1	1	0	1	0	1	0	1
1	0	0	0	1	0	0	1	1	1	1	0
1	0	0	0	1	0	1	1	1	1	0	1
1	0	1	1	0	0	0	1	0	0	1	0
1	0	1	1	0	1	1	0	1	0	1	0

↑
tautology

Line 7: $((\neg\phi \vee \psi) \rightarrow (\neg\psi \rightarrow \neg\phi)) \rightarrow ((\neg\phi \vee \psi) \rightarrow (\phi \rightarrow \psi))$

0	1	1	1	1	1	1	1	0	1	1	1	1	1
0	1	1	0	1	0	0	1	0	1	1	1	0	1
0	1	0	0	1	0	1	1	0	1	0	0	1	1
0	1	0	0	1	0	1	0	1	0	0	1	1	0
1	0	1	1	1	1	1	1	1	0	1	1	1	1
1	0	1	1	0	1	0	0	1	0	1	1	1	0
1	0	1	0	1	0	1	1	1	0	1	0	1	1
1	0	1	0	1	0	1	0	1	0	1	0	1	0

↑
taut.