

(i) $(P \wedge \neg R) \vee Q$

P	Q	R	$\neg R$	$P \wedge \neg R$	$(P \wedge \neg R) \vee Q$
T	T	T	F	F	T
T	T	F	T	T	T
T	F	T	F	F	F
T	F	F	T	T	T
F	T	T	F	F	T
F	T	F	T	F	T
F	F	T	F	F	F
F	F	F	T	F	F

(ii) $\neg Q \Rightarrow (\neg P \Rightarrow \neg R)$

P	Q	R	$\neg P$	$\neg Q$	$\neg R$	$\neg P \Rightarrow \neg R$	$\neg Q \Rightarrow (\neg P \Rightarrow \neg R)$
T	T	T	F	F	F	T	T
T	T	F	F	F	T	T	T
T	F	T	F	T	F	T	T
T	F	F	F	T	T	T	T
F	T	T	T	F	F	F	T
F	T	F	T	F	T	T	T
F	F	T	T	T	F	F	F
F	F	F	T	T	T	T	T

(iii) $(P \Rightarrow R) \Rightarrow Q$

P	Q	R	$P \Rightarrow R$	$(P \Rightarrow R) \Rightarrow Q$
T	T	T	T	T
T	T	F	F	T
T	F	T	T	F
T	F	F	F	T
F	T	T	T	T
F	T	F	T	T
F	F	T	T	F
F	F	F	T	F

Since the truth tables of $(P \wedge \neg R) \vee Q$ and $(P \Rightarrow R) \Rightarrow Q$ are the same, they must be logically equivalent.