Let R, S and T be statements. What is the negation of

$$(\neg R \wedge S) \Rightarrow \neg T$$

Solution:

$$\neg((\neg R \wedge S) \Rightarrow \neg T) \equiv \neg(\neg(\neg R \wedge S) \vee \neg T)$$
$$\equiv (\neg R \wedge S) \wedge T$$

Key relationship here was

$$A \Rightarrow B \equiv \neg A \vee B$$