

Dr. Wilson is in his office and Dr. Cook is not in her office.

If today is not Saturday, then Amy is at work and Kate is at school.

**Which are sentences of TFL and which are not?**

1.  $(P \vee \neg Q) \& R$
2.  $((S \rightarrow T) \vee \neg(R \leftrightarrow S))$
3.  $((t \& s) \rightarrow (p \rightarrow r))$
4.  $((R \neg \rightarrow Q) \rightarrow R)$
5.  $(P \vee Q \& R)$
6.  $(\neg(\neg R \vee \neg S) \& \neg\neg R)$

**Scope and the main logical operator**

1.  $((P \& R) \vee (Q \rightarrow \neg R))$
2.  $((Q \vee R) \rightarrow T)$
3.  $(\neg S \rightarrow (M \& K))$
4.  $\neg(P \leftrightarrow Q)$
5.  $(F \& D) \leftrightarrow (\neg C \rightarrow B)$
6.  $\neg(M \vee (R \& \neg W))$
7.  $(H \& J) \vee \neg(C \& (D \rightarrow G))$
8.  $((P \rightarrow Q) \& (R \& P)) \vee (R \& Q)$
9.  $((P \vee Q) \& T) \rightarrow (R \& \neg P) \leftrightarrow (S \& \neg T)$