2. (a) \( \neg(P \lor Q) \iff (\neg P \land \neg Q) \)
(b) \( \neg(P \land \neg Q) \iff (\neg P \lor Q) \)
(c) To prove \((P \implies Q) \iff (\neg P \lor Q)\), we look at the negation of both statements:
\( \neg(P \implies Q) \iff (P \land \neg Q) \)
\( \neg(\neg P \lor Q) \iff (P \land \neg Q) \)
Which implies that the original statements should be equivalent.
(d) If \( H \) and \( \neg C \) imply a contradiction \((S \text{ and } \neg S)\), then, if \( H \) we necessarily have \( C \), i.e. \( H \implies C \).

4. \( \neg(\text{For every line } l \text{ and for every point } P \text{ that does not lie on } l \text{ there exists a unique line } m \text{ through } P \text{ that is parallel to } l)\):
There exists a line \( l \) and a point \( P \) that does not lie on \( l \) such that either there exist more than one line through \( P \) parallel to \( l \), or all the lines through \( P \) intersect \( l \).

5. (b) The converse is:
Let \( l \) and \( m \) be two lines, and \( t \) a transversal to \( l \) and \( m \). If \( l \) and \( m \) meet on one side of the transversal then the sum of the degrees of the interior angles on that side of the transversal is less than \( 180^\circ \).