

Simplifying a logical expression

Can we simplify these?

▶ $\neg (A \text{ OR } B)$

Solution:

$A \text{ OR } B$ is true when at least one of A or B is true.

Hence it is false if and only if both A and B are false.

In other words:

$$\neg(A \text{ OR } B) \equiv \neg A \text{ AND } \neg B$$