$$p1: a_1 \vee a_2 \vee \cdots \vee a_n$$

$$p2: b_1 \vee b_2 \vee \cdots \vee b_m$$

having two literals a_i and b_j, where $1 < i \leq n$ and $1 \leq j \leq m$, such that $\neg a_i = b_j$. Binary resolution produces the clause:

$$a_1 \vee \cdots \vee a_{i-1} \vee a_{i+1} \vee \cdots \vee a_n \vee b_1 \vee \cdots \vee b_{j-1} \vee b_{j+1} \vee \cdots \vee b_m.$$

The notation above indicates that the resolvent is made up of the disjunction of all the literals of the two parent clauses except for the literals a_i and b_j.

A simple argument can give the intuition behind the resolution principle. Suppose

$$a \vee \neg b \text{ and } b \vee c$$

are both true statements. Observe that one of b and $\neg b$ must always be true and one always false ($b \vee \neg b$ is a tautology). Therefore, one of

$$a \vee c$$