

Ordered Resolution

Unordered Resolution

Ordinary resolution is *unordered*. The rule can be applied to any literal in clause.

$$\frac{\{\phi_1, \dots, X, \dots, \phi_m\} \quad \{\psi_1, \dots, \leftarrow X, \dots, \psi_n\}}{\{\phi_1, \dots, \phi_m, \psi_1, \dots, \psi_n\}}$$

The more opportunities for resolution, the larger the search space.

Example

Negated Goal

$$\{\leftarrow p_3, \leftarrow q_3, \leftarrow r_3\}$$

Premises

$$\{p_3, \leftarrow p_2\} \quad \{q_3, \leftarrow q_2\} \quad \{r_3, \leftarrow r_2\}$$

$$\{p_2, \leftarrow p_1\} \quad \{q_2, \leftarrow q_1\} \quad \{r_2, \leftarrow r_1\}$$

$$\{p_1\} \quad \{q_1\} \quad \{r_1\}$$