

Definition of Horn Knowledge base file.

Symbol	Meaning	Description
ok:x,y	Square x,y is safe	
st:x,y	An agent perceives stench at square x,y	
pt:x,y	There is a pit at square x,y	
br:x,y	There is a breeze at square x,y	
wp:x,y	There is a Wumpus at square x,y	
gl:x,y	There is gold at square x,y	
Note:	Examples	
n in front of a symbol indicate negation proposition of that symbol	<ul style="list-style-type: none"> • nok:x,y (not safe at square x,y) • nst:x,y (no stench at square x,y) • npt:x,y (no pit at square x,y) • nwp:x,y (no Wumpus at square x,y) • ngl:x,y (no gold at square x,y) 	

Note:

- Sign: + means **positive**, - mean **negative**. It is used to specify **positive and negative literals** in horn clause.
- Each literal must have a **sign either – or +**.
- All Horn clause in form of **disjunction of literals**.
- Horn clause form: - nst:1,1 + nwp:2,1 (-[SPACE]nst:1:1[SPACE]+[SPACE]nwp:2,1)

Examples:

Note:

A horn clause consists of a **body (premise)** and a **head (conclusion)**.

Body	Head	Horn clause	Description
	+ ok:1,1	+ ok:1,1	Square 1,1 is safe
	+ nst:1,1	+ nst:1,1	There is no stench at square 1,1
- nst:1,1	+ nwp:2,1	- nst:1,1 + nwp:2,1	nst:1,1 implies nwp:2,1
- nwp:1,2 - npt:1,2	+ ok:1,2	- nwp:1,2 - npt:1,2 + ok:1,2	(nwp:1,2 and npt:1,2) implies ok:1,2