AI Assignment -1
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1) Convert the foll. FOL to CNF
(onvert the foll. FOL to CNF \(\Psi\)
① Eliminate implication: - (A → B = ¬AVB ∀n [¬f z Animal(z)^Kilk(xiz)] V +y ¬ loves (y,z)
2) Move - Invalves Fup = +x -P +n [+z - (Animal (z) 1 kills (x,z)] v +y - loves (y,x) +n [+z - (Animal (z)) V - kills (x,z)] v +y - loves (y,x)
the Hz T (Animal (z)) V T Kills (2,2) J V ty T loves (y)
3 Remove/Drop Universal quanti.
3 Remove/Deop Universal quanti. [- Aninols(z) V - Kills(z,z)] V - loves (y,x)
CNF ->
7 Animal (z) V 7 Kills (x, z) V 7 loves (y, x)
2.) Convert the sentences into FOL & prove using Sol.
Rules & facts:-
O Cold & Precipitation -> Snow
$Cold(n)^{\Lambda}$ precipitation $(n) \Rightarrow Snow(n)$
7 (cold (n) 1 precipitation (n) V snow (n)
- cold (n) V - phecipitation (n) V snow (n)
2) January -> cold
January(n) = 1 (old(n))
7 January (x) V cold (n)

3) clouds -> precipitation
clouds (n) => Precipitation(x)
7 obuds (2) V precipitation (21)
(4) January (n)
(5) Clouds (n)
To plave: Snow (n)
\sim
-> Resolution of (1) \$ (2)
\overline{C}
6 - Precipitation (n) V snao(n) V - January (n)
-> Resolution of 6 & 4
7 - Percipitation (n) V snow (n)
-> Resolution of (7) & (3)
, , coccarron o
(8) Snow(n) V ¬ Clouds (n)
-> Resolution of (8) & (5)
(9) Snow (n)
Mence Proved.