③ The Unicorn is magical if it is horned.

can we prove that the unicorn is mythical? magical? or horned.

① $\forall x (Myth(x) \rightarrow \neg Mort(x))$

$\neg Myth(x) \rightarrow Mar(x) \wedge Mamm(x)$

② $\neg Mort(x) \vee Mam(x) \rightarrow Horn(x)$.

③ $Horn(x) \rightarrow Mag(x)$

Incomplete

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Predicate logic :-

(1) $\sim(\sim F) = F$

(2) $\forall x F(x) \vee G = \forall x (f(x) \vee G)$

(3) $\exists x\, f(x) \vee G = \exists x (F(x) \vee G)$

(4) $\forall x\, f(x) \wedge G = \forall x (F(x \wedge G)$

(5) $\exists x\, f(x) \wedge G = \exists x (f(x) \wedge G)$

(6) $\sim(\forall x)\, f(x) = \exists x \sim(f(x))$

(7) $\sim (\exists x) f(x) = \forall x \sim (f(x))$

(8) $\forall x\, f(x) \wedge \forall x\, G(x) = \forall x (f(x) \wedge G(x))$

(9) ~~$\forall x\, f(x) \vee \forall$~~

(9) $\exists x\, f(x) \vee \exists x\, G(x) = \exists x (f(x) \vee G(x))$.

Q. All dog have tail

$\forall (x) :- dog(x) \rightarrow tail(x)$.

Q. Some employees are sick today.

$\exists (x) :- employee(x) \Rightarrow sick(today)$.

(4). Every gradner likes the sun.

$\forall (x) :- gradner(x) \Rightarrow likes(x, sun)$.

(5) Not every gardner likes the sun.

$\nexists (x) :- gardner(x) \rightarrow likes(x, sun)$.

$\sim . (\forall x) :- gardner(x) \rightarrow likes(x, sun)$.

→ Ram is not tall

$\sim tall(ram)$.

* All purple mushrooms are poisonous

~~$x. \forall(x) : purple(x) \rightarrow poisonous(mushroom\ x)$~~

$\forall(x) : (mus(x) \wedge pup(x)) \rightarrow pois(x)$.

NO purple mushrooms are poisonous.

$\forall x : (mus(x) \wedge pu(x)) \rightarrow \sim pois$