

④

I. $\forall x \forall y \exists z D(x) \wedge P(x,y) \Rightarrow L(z) \wedge P(z,y)$

~~Negation:~~

Solem: $D(x) \wedge P(x,y) \Rightarrow L(f(x,y)) \wedge P(f(x,y),y)$

Negation: CNF

$\hookrightarrow \neg D(x) \vee \neg P(x,y) \vee L(f(x,y)) \wedge P(f(x,y),y)$

$\hookrightarrow \neg D(x) \vee \neg P(x,y) \vee L(f(x,y)) \wedge \neg D(x) \vee \neg P(x,y) \vee P(f(x,y),y)$

II. $\exists x D(x) \wedge P(x,S)$

Solem: $D(a) \wedge P(a,S) = \text{CNF}$

III. $\alpha = \exists z L(z) \wedge P(z,S)$

α is to proof \rightarrow Resolution with $\neg \alpha$

$\neg \alpha = \neg L(z) \vee \neg P(z,S) = \text{CNF}$