Progress Report

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References

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$x = \mathsf{a} \vee x \neq \mathsf{a}$

$\mathsf{f}(\mathsf{a}) \neq \mathsf{f}(\mathsf{b})$

$R = \{x = \mathsf{a}\}$ is ground complete

$\sigma = \{x \mapsto \mathsf{b}\} \; (x = \mathsf{a})\sigma = \mathsf{a} \to \mathsf{b}$ with $\mathsf{a} > \mathsf{b} \; \mathsf{f}(a) \neq \mathsf{b}$

$\perp = \perp \vee \perp \neq \perp$

$\mathsf{f}(\perp) \neq \mathsf{f}(\mathsf{a})$

$P(a), \neg P(f(a, b)), f(x, b) = x$
$P(a), \neg P(f(a, b)), f(\perp, b) = \perp$
$\{f(x, b) = x\}$ is ground complete and with $\{x \mapsto a\}$ we get $\neg P(a)$