

# More derivations

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$$\exists x \exists y \forall z ((Fx \wedge Gy) \wedge Hz)$$

Apply inference rules to get:

*Ha*

$$\exists x(Fx \wedge \forall xFx)$$
$$\forall x(Fx \rightarrow Hx)$$

Apply inference rules to get:

*Ha*

$$\forall x \exists y (Fx \rightarrow (Gy \rightarrow Hx))$$
$$\forall x (Fx \wedge Gx)$$

Apply inference rules to get:

*Ha*

$$\neg \exists x \neg Hx$$

Apply inference rules to get:

$$Ha$$

$$\neg \exists x \neg Hx$$
$$\forall x Hx$$

Apply inference rules to get:

$$Ha$$