

CIS 624 Assignment 4 Problem 1

He He

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$T := \lambda xy. x$

$F := \lambda xy. y$

$IF := \lambda btf. b\ t\ f$

$AND := \lambda ab. IF\ a\ b\ F$

$PRED := \lambda nfx. n(\lambda g. \lambda h. h(g\ f))(\lambda u. x)(\lambda u. u)$

$SUB := \lambda mn. n\ PRED\ m$

$ISZERO := \lambda n. n(\lambda x. F)T$

$ISEQUAL := ADD(ISZERO(SUB\ a\ b)\ ISZERO(SUB\ b\ a))$