$$ {}^{X}K \ni {}^{X}\daleth = X^{i}{}_{i}\daleth $$

$$ K^{\daleth} = {}^{X}K \sqcap \underbrace{{}^{X}\daleth^{X}K} $$

$$ \begin{array}{ccccc} & ()^{\daleth} & & & \\ K^{\daleth} & \longleftarrow & {}^{X}K & \longleftarrow & K \\ & & \longleftarrow\!\!\!\frown & & \\ & & ()^{\daleth} & & \end{array} $$

$$ k^{\daleth} = k + {}^{X}\daleth\,{}^{X}K $$

$$ \begin{array}{ccc} K^{\sigma} & \xleftarrow{\ \sigma\ } & K \\ \cap & & \cap \\ {}^{Y}K^{\sigma} & \xleftarrow[\overline{()}^{\sigma}]{} & {}^{X}K \end{array} $$

$$ {}^{Y}\bar{\daleth}^{\sigma} = Y^{i}{}_{i}\daleth^{\sigma} $$

$$ \begin{array}{ccc} K^{\daleth} & \xleftarrow{\ ()^{\daleth}\ } & K \\ \cap & & \cap \\ {}^{Y}K^{\daleth} & \xleftarrow[\overline{()}^{\daleth}]{} & {}^{X}K \end{array} $$

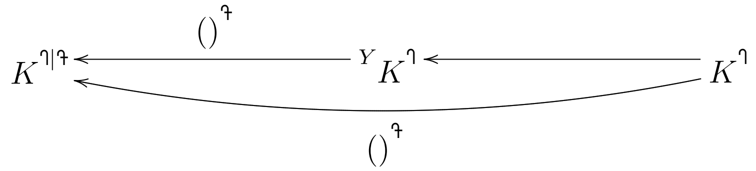
$$ {}^{X}\gimel = X^{j}{}_{j}\gimel \mapsto {}^{Y}\bar{\gimel}^{\daleth} = Y^{j}{}_{j}\gimel^{\daleth} $$

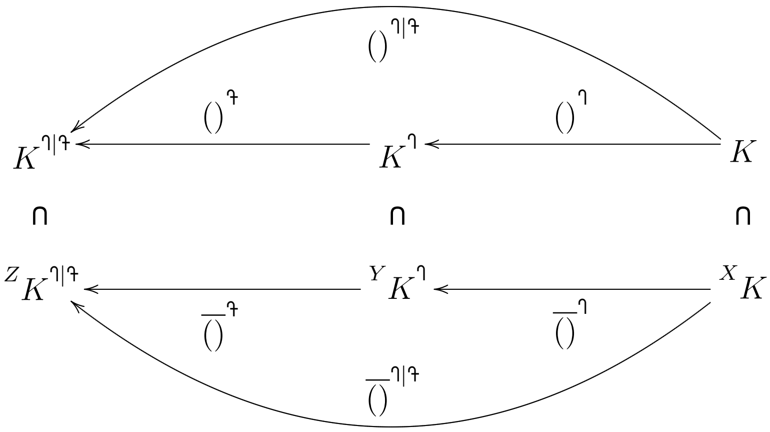
$$ {}^{X^{\daleth}}\bar{\daleth}^{\daleth} = 0^{\daleth} \Longrightarrow {}^{Y}\bar{\daleth}^{\daleth} = \overbrace{Y - X^{\daleth}}^{m}\,{}^{Y}\beth : \quad {}^{Y}\beth \in {}^{Y}K^{\daleth} : \quad {}^{X^{\daleth}}\beth \neq 0^{\daleth} $$

$$ \text{LHS} = \overbrace{X^{\daleth}}^{i}{}_{i}\daleth^{\daleth} = \overbrace{X + {}^{X}\daleth^{X}K}^{i}\underbrace{{}_{i}\daleth + {}^{X}\daleth^{X}K} = \underbrace{X^{i} + {}^{X}\daleth^{X}K}\underbrace{{}_{i}\daleth + {}^{X}\daleth^{X}K} $$

$$ = X^{i}{}_{i}\daleth + {}^{X}\daleth\,{}^{X}K = {}^{X}\daleth + {}^{X}\daleth\,{}^{X}K = \text{RHS} $$

$$ K^{\daleth|\beth} = \left(K^{\daleth}\right)^{\beth} $$





$$ {}^{X^{\rceil|\rceil\!\!\!-}}\overline{\rceil}^{\rceil|\rceil\!\!\!-} = {}^{Y^{\rceil\!\!\!-}}\overline{\rceil}^{\rceil|\rceil\!\!\!-} = 0_Y^{\rceil\!\!\!-} $$

$$ \text{LHS} = \left({}^{X^{\rceil}}\overline{\rceil}^{\rceil}\right)^{\rceil\!\!\!-} = \left(0_X^{\rceil}\right)^{\rceil\!\!\!-} = 0_Y^{\rceil\!\!\!-} $$

$$ {}^{Z}\overline{\rceil}^{\rceil|\rceil\!\!\!-} = {}^{Z}\overline{\overbrace{Y - X^{\rceil}}^{m}{}^{Y}\rceil\!\!\!-}^{\rceil\!\!\!-} = \overbrace{Z - X^{\rceil|\rceil\!\!\!-}}^{m}\;{}^{Z}\overline{\rceil\!\!\!-} \underset{Z = Y^{\rceil\!\!\!-}}{\Longrightarrow} \text{MHS} = \overbrace{Y^{\rceil\!\!\!-} - X^{\rceil|\rceil\!\!\!-}}^{m} \underbrace{{}^{Y^{\rceil\!\!\!-}}\overline{\rceil\!\!\!-}}_{= 0_Y^{\rceil\!\!\!-}} = 0_Y^{\rceil\!\!\!-} $$