$\bigotimes$
∞
2
$\dots$
k
$(k+$
$1)$
∞
$(\infty, 1)$
$k >$
1
k
$\bigotimes$
Δ^n
$[n] \in$
Δ
$([n])$
$[m] \to$
$[n]$
J
Δ^J
$\Delta^m \to$
Δ^n
Δ^n
$0 \leq$
$k \leq$
n

$$\Lambda^n_k := \bigcup_{k \in J \neq [n]} \Delta^J,$$

$0 <$
$k <$
n
∞
Λ^2_k
$k =$
$0, 1, 2$
Λ^2_1
Λ^2_0, Λ^2_2
$[ampersandreplacement = \&, columnsep = 0, rowsep = 0.8em]\&1\&\&\&1\&\&\&10\&\&2\&0\&\&2\&0\&\&2\&\Lambda^2_0\&\&\&\Lambda^2_1\&\&\&\Lambda^2_2$

$\bigotimes$-
$\mathcal{X}$
$0 <$
$k <$
n

$$Hom(\Delta^n, \mathcal{X}) \to Hom(\Lambda^n_k, \mathcal{X})$$

$[ampersandreplacement = \&]\Lambda^n_k\&X.\Delta^n[from = 1{-}1, to = 2{-}1][from = 1{-}1, to = 1{-}2]["\exists"', dashed, from = 2{-}1, to =$

$\mathcal{X}$
$\bigotimes$
X
X_0
$\Delta^0 \to$
X
$\mathcal{X}$
X_1
$\Delta^1 \to$
X
x
id_x
$\Delta^1 \to$
$\Delta^0 x \to X$
X
X_2
$\Delta^2 \to$
X
$[ampersandreplacement =$
$\&, columnsep =$
$0, rowsep =$
$0.8em]\&y$
$x\&\&z, ["f", from =$
$2-$
$1, to =$
$1-$
$2]["g", from =$
$1-$
$2, to =$
$2-$
$3]["h"', from =$
$2-$
$1, to =$
$2-$
$3]$
h
f
g
id_x
f, g
g
f
$(-) \colon \Delta \to$
Δ