$$egin{aligned} \mathbf{LHS} \ni f &= \{ \coprod_p X^p \otimes Y^{n-p} 
ightarrow Z^n \}_{n \in \mathbb{Z}} \ &\cong \{ X^p \otimes Y^{n-p} 
ightarrow Z^n \}_{n \in \mathbb{Z}} \end{aligned}$$

 $\cong \{X^p \otimes Y^{n-p} \to Z^n\}_{p,n \in \mathbb{Z}}$  $\cong \{X^p \to (Y^{n-p}, Z^n)\}_{p,n \in \mathbb{Z}}$ 

 $\cong \{X^p \to | | (Y^{n-p}, Z^n)\}_{p \in \mathbb{Z}} = g \in \mathbf{RHS}.$