

$$\begin{array}{ccccc}
 H_1 \times 1 & \xrightarrow{\text{ru}_{H_1}^{\langle \mathbf{Set}, \times, 1 \rangle}} & H_1 & \xleftarrow{\text{lu}_{H_1}^{\langle \mathbf{Set}, \times, 1 \rangle}} & 1 \times H_1 \\
 \downarrow f * \text{id}_* & & \downarrow f & & \downarrow \text{id}_* * f \\
 \text{Pow}(N_1 + \emptyset) & \xrightarrow{\text{Pow}(\text{ru}_{N_1}^{\langle \mathbf{Set}^{\text{op}}, +, \emptyset \rangle})} & N_1 & \xleftarrow{\text{Pow}(\text{lu}_{N_1}^{\langle \mathbf{Set}^{\text{op}}, +, \emptyset \rangle})} & \text{Pow}(\emptyset + N_1)
 \end{array}$$