

NOTE ON POLYNOMIALS

KEISUKE HOSHINO

Notation 0.1. We employ the following notations.

- Sets are regarded as discrete categories.
- We write
- For each set S and a functor $X: S \rightarrow \mathbf{Set}$, we write X_s for the image of $s \in S$ under X . Moreover, we write $(X_s)_{s:S}$ for X .

Definition 0.2. We define a category **Poly** as the Grothendieck construction of the following pseudo functor.

$$\mathbf{Set} \xrightarrow{[-, \mathbf{Set}]^{\mathrm{op}}} \mathfrak{Cat}$$

A *polynomial* is an object in **Poly**.

REFERENCES

Email address: hoshinok@kurims.kyoto-u.ac.jp

RESEARCH INSTITUTE OF MATHEMATICAL SCIENCE, KYOTO UNIVERSITY