

Rules for make a function from primitive function

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Primitive functions

$$\begin{array}{cccc}
 \frac{\text{Int} \rightarrow \text{Int}}{[\text{Int}] \rightarrow [\text{Int}]} \text{MAP1} & \frac{\text{Int} \rightarrow \text{Int} \quad [\text{Int}]}{[\text{Int}]} \text{MAP2} & \frac{\text{Int}}{\text{Int} \rightarrow \text{Int}} \text{ADD1} & \frac{\text{Int}}{\text{Int} \rightarrow \text{Int}} \text{MULT1} \\
 \frac{[\text{Int}]}{[\text{Int}]} \text{TAIL1} & \frac{[\text{Int}]}{[\text{Int}]} \text{REVERSE1} & \frac{}{[\text{Int}] \rightarrow [\text{Int}]} \text{TAIL} & \frac{}{[\text{Int}] \rightarrow [\text{Int}]} \text{REVERSE} \\
 \frac{}{\text{Int}} \text{RANDOMINT} & \frac{\text{Int} \rightarrow \text{Int} \quad \text{Int} \rightarrow \text{Int}}{\text{Int} \rightarrow \text{Int}} \text{COMP} & \frac{[\text{Int}] \rightarrow [\text{Int}] \quad [\text{Int}] \rightarrow [\text{Int}]}{[\text{Int}] \rightarrow [\text{Int}]} \text{COMPLIST}
 \end{array}$$

Example

$$\frac{\frac{\frac{}{\text{Int}} \text{RANDOMINT}}{\text{Int} \rightarrow \text{Int}} \text{ADD1}}{[\text{Int}] \rightarrow [\text{Int}]} \text{MAP1} \quad \frac{\frac{\frac{}{\text{Int}} \text{RANDOMINT}}{\text{Int} \rightarrow \text{Int}} \text{ADD1} \quad \frac{\frac{\frac{}{\text{Int}} \text{RANDOMINT}}{\text{Int} \rightarrow \text{Int}} \text{MULT1}}{\text{Int} \rightarrow \text{Int}} \text{COMP}}{[\text{Int}] \rightarrow [\text{Int}]} \text{MAP1}$$