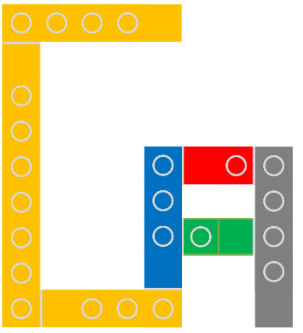

Visual Category Theory

Dmitry Vostokov

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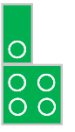

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Part$_6 \in$ C$^{\text{Parts}}$

Visual Category Theory Brick by Brick, Part 6: Using LEGO® to Teach Abstract Mathematics

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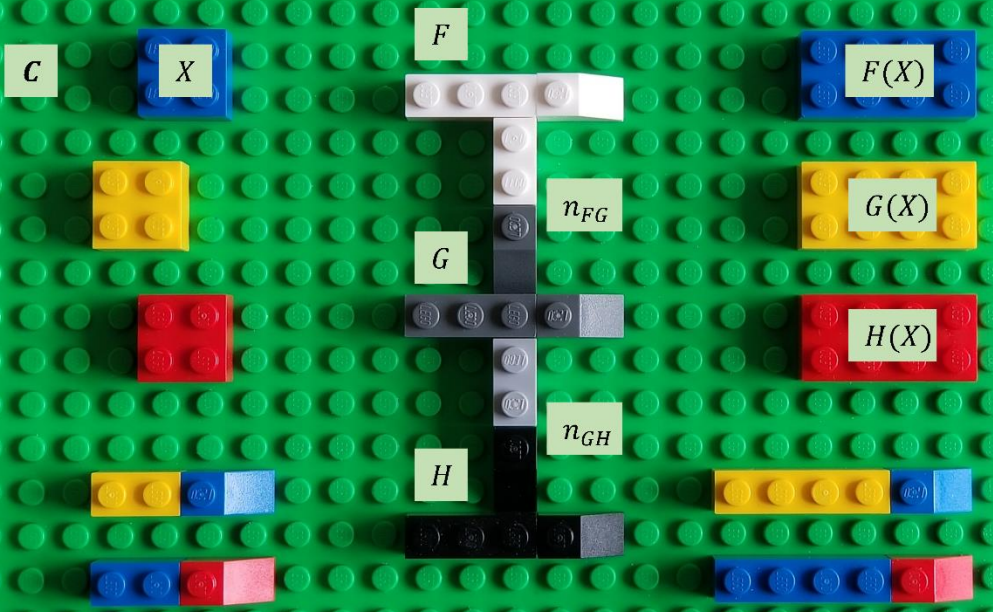
In $Part_1$ we introduced natural transformations between functors.
Natural transformations can be "vertically" composed.

$F, G, H : \boldsymbol{C} \to \boldsymbol{D}$, $X \in \boldsymbol{C}$, $F(X), G(X), H(X) \in \boldsymbol{D}$

$n_{FG} : F \to G$, $n_{FG}(X) : F(X) \to G(X)$, $n_{GH} : G \to H$, $n_{GH}(X) : G(X) \to H(X)$

$n_{FH} = n_{GH} \circ n_{FG} : F \to H$, $n_{FH}(X) = n_{GH}(X) \circ n_{FG}(X) : F(X) \to H(X)$



In addition to 12 books mentioned in $Part_1$, $Part_3$, $Part_4$, and $Part_5$ we also used:

- Iconicity and Abduction by Gianluca Caterina and Rocco Gangle
- Directed Algebraic Topology: Models of Non-Reversible Worlds by Marco Grandis

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