

Aritmetika množic

Kartezični produkt / zmnožek $A \times B$, elementi
urjeni pari (x, y)
 $x \in A, y \in B$

Vsota $A + B$ elementi:
 $\text{in}_1(x) \quad x \in A$

Opomba: prvo uro je crknil Wacom in
sem predaval na tablo razdelek
2.5 "Izomorfizem množic"

Nadaljujemo z 2.6:

Aritmetika:
 $a + 0 = a$

Primer: $A + (B + C) \cong (A + B) + C$

$f: A + (B + C) \longrightarrow (A + B) + C$

$a \in A$ $\text{in}_1(a) \longmapsto \text{in}_1(\text{in}_1(a))$
 $b \in B$ $\text{in}_2(\text{in}_1(b)) \longmapsto \text{in}_1(\text{in}_2(b))$
 $c \in C$ $\text{in}_2(\text{in}_2(c)) \longmapsto \text{in}_2(c)$

~~$\nexists$
 $\text{in}_1(\text{in}_2(a))$
 $\text{in}_2(\text{in}_2(b))$~~

$f: \{1, 2, 3\} \rightarrow \mathbb{N}$
 $x \mapsto \boxed{\quad}$

$A \mapsto B$
 $a \mapsto b$

$(7+3)+5$
 $7+3+5$

$X+Y$

~~$(A+B)+C$~~
 $A+B+C$
 in_1
 in_2
 in_3

NI OK: $f: \mathbb{R} \rightarrow \mathbb{R}$
 $f(x) = ax + b$

OK: Naj bosta $a, b \in \mathbb{R}$
 $f: \mathbb{R} \rightarrow \mathbb{R}$
 $f(x) = ax + b$

$$g: (A + B) + C \rightarrow A + (B + C)$$

$$\begin{array}{lll} x \in A & \text{in}_1(\text{in}_1(x)) & \mapsto \text{in}_1(x) \\ y \in B & \text{in}_2(\text{in}_1(y)) & \mapsto \text{in}_2(\text{in}_1(y)) \\ z \in C & \text{in}_2(z) & \mapsto \text{in}_2(\text{in}_2(z)) \end{array}$$

Preslikave: iz in v $\emptyset$:

$$\emptyset \rightarrow A$$

prazna preslikava

$$f, g: \emptyset \rightarrow A$$

$$f = g ?$$

$$\text{za vse } x \in \emptyset, f(x) = g(x) ? \checkmark$$

$$A^\emptyset \cong 1$$

$$\text{prazna} \mapsto ()$$

DOMAĆE BRANJE:

$$A \rightarrow \emptyset ?$$

Poglavje 2 do konca.

$$f: \{1, 2, 3\} \rightarrow \{\square, *\}$$

x	f(x)
1	$\square$
2	$\square$
3	*

$$g: \{10\} \rightarrow \{\square, *\}$$

x	g(x)
10	$\square$

$$h: \{\} \rightarrow \{\square, *\}$$

x	h(x)
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