

## Addenda

### Changes in notation

Concept name	old notation	new notation
Cartesian product of two sets	$\{ A, B \}$	$A \times B$
Cartesian product of three sets	$\{ A, B, C \}$	$A \times B \times C$
Affine map	$\text{AffineMap}(a, b)$	$a\Box + b$
Forward difference	$\text{fD}(f, h)$	$\Delta_h[f]$
Backward difference	$\text{bD}(f, h)$	$\nabla_h[f]$
Central difference	$\text{cD}(f, h)$	$\delta_h[f]$
Forward difference sequence	$\text{fdif}(f, h)$	$\vec{\Delta}_h[f]$
Backward difference sequence	$\text{bdif}(f, h)$	$\vec{\nabla}_h[f]$
Central difference sequence	$\text{cdif}(f, h)$	$\vec{\delta}_h[f]$
Difference	$\Delta(f, x, y)$	$\Delta[f](x, y)$
Difference	$[\! f, x, y, z \!]$	$\Delta[f](x, y, z)$
Difference	$[\! f, x, y, z, v \!]$	$\Delta[f](x, y, z, v)$
Identity matrix of size $n$ over $K$	$\begin{pmatrix} 1 & & 0 \\ & \ddots & \\ 0 & & 1 \end{pmatrix}_{K}^{n \times n}$	$I_K^{n \times n}$
Zero matrix of size $n \times m$ over $K$	$\begin{pmatrix} 0 & \dots & 0 \\ \vdots & \ddots & \vdots \\ 0 & \dots & 0 \end{pmatrix}_K^{n \times m}$	$0_K^{n \times m}$

### Number sets

- $\mathbb{N}$  - the set of natural numbers
- $\omega = \mathbb{N}$  - the set of finite ordinal numbers
- $\mathbb{Z}$  - the set of integer numbers
- $\mathbb{Q}$  - the set of rational numbers
- $\mathbb{R}$  - the set of real numbers
- $\overline{\mathbb{R}} = \mathbb{R} \cup \{-\infty, +\infty\}$  - the set of extended real numbers
- $\mathbb{C}$  - the set of complex numbers

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