

# Notation and Symbols

## Operators

$=$	equal to
$+$	add, or
$-$	subtract, negate, not
$/$	divide
$ $	divides
$\in$	element of
$\cap$	intersection
$\cup$	union
$\setminus$	set subtraction
$\subseteq$	subset
$\subset$	proper subset
$\wedge$	and
$\vee$	or

## Data Types and Representation

Boolean

$\mathbb{B}$

Numeric

$\mathbb{N}$	positive integers
$\mathbb{N}_0$	positive integers plus zero
$\mathbb{Z}$	integers
$\mathbb{Q}$	rational numbers
$\mathbb{R}$	real numbers
$\mathbb{C}$	complex numbers
$\mathbb{R}^2$	real plane
$\mathbb{R}^3$	3-space

The set of irrational numbers is given by:  $\mathbb{R} \setminus \mathbb{Q}$

$$\mathbb{N} \subset \mathbb{N}_0 \subset \mathbb{Z} \subset \mathbb{Q} \subset \mathbb{R} \subset \mathbb{C}$$

$$\mathbb{R} \subset \mathbb{R}^2 \subset \mathbb{R}^3$$

## Numeric Symbols

$m, n$	integer variable
$a, b, c$	arbitrary constant
$x, y$	real variable
$\boldsymbol{x}, \boldsymbol{v}$	vector variable
$\boldsymbol{A}, \boldsymbol{B}$	matrix
$z, s$	complex variable
$f, g$	scalar valued function
$\boldsymbol{f}, \boldsymbol{g}$	vector valued function
$\mathbf{i}, \mathbf{j}, \mathbf{k}$	unit basis vectors

## Greek

$\alpha$	A	alpha
$\beta$	B	beta
$\gamma$	$\Gamma$	gamma
$\delta$	$\Delta$	delta
$\epsilon, \varepsilon$	E	epsilon
$\zeta$	Z	zeta
$\eta$	H	eta
$\theta, \vartheta$	$\Theta$	theta
$\iota$	I	iota
$\kappa$	K	kappa
$\lambda$	$\Lambda$	lambda
$\mu$	M	mu
$\nu$	N	nu
$\xi$	$\Xi$	xi
$o$	O	omicron
$\pi, \varpi$	$\Pi$	pi
$\rho, \varrho$	P	rho
$\sigma, \varsigma$	$\Sigma$	sigma
$\tau$	T	tau
$v$	$\Upsilon$	upsilon
$\phi, \varphi$	$\Phi$	phi
$\chi$	X	chi
$\psi$	$\Psi$	psi
$\omega$	$\Omega$	omega