

# 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
$\mathbf{x}, \mathbf{v}$	vector variable
$\mathbf{A}, \mathbf{B}$	matrix
$z, s$	complex variable
$f, g$	scalar valued function
$\mathbf{f}, \mathbf{g}$	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
$\omicron$	$O$	omicron
$\pi, \varpi$	$\Pi$	pi
$\rho, \varrho$	$P$	rho
$\sigma, \varsigma$	$\Sigma$	sigma
$\tau$	$T$	tau
$\upsilon$	$\Upsilon$	upsilon
$\phi, \varphi$	$\Phi$	phi
$\chi$	$X$	chi
$\psi$	$\Psi$	psi
$\omega$	$\Omega$	omega