

Lesson 1_Handout_Vocab list of mathematical expressions

Basics

$a + b$	a plus b
$a - b$	a minus b
$a \cdot b$	ab , a times b
$\frac{a}{b}$, a/b	a over b , a divided by b
$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, \dots , $\frac{1}{10}$	one half, one third, one fourth, ... , one tenth
$\frac{5}{2}$, $\frac{2}{3}$, \dots , $\frac{7}{10}$	five halves, two thirds, ... , seven tenths
$a = b$	a equals b , a is equal to b
$a \neq b$	a different from b , a not equal to b
$a < b$	a (strictly) less than b
$a \leq b$	a less than or equal to b
$a > b$	a (strictly) bigger than b , a greater than b
$a \geq b$	a greater than or equal to b

Powers and roots

a^b	a to the b ,
	a to the b -th (power) [if b is a positive integer]
x^2	x squared
x^3	x cubed
x^{-1}	x inverse
$\sqrt[n]{t}$	n -th root of t
\sqrt{t}	square root of t
$\sqrt[3]{t}$	cubic root of t

Sets

\emptyset	(the) empty set
$A \cup B$	A union B
$A \cap B$	A intersected with B
A^c	the complement of A
$A \setminus B$	A minus B
$A \times B$	A times B
$x \in A$	x in A , x belongs to A , x belonging to A

Functions

$f : U \rightarrow V$

f from U to V

$f(x)$

f of x

$x \mapsto f(x)$

x maps to $f(x)$

\overrightarrow{AB}

or the directed line segment from a to b
the ray from a to b

cos sin tan etc.

cosine/cosinus sine/sinus tangent etc.

η θ ξ

eta [íta] theta [thíta] xi [ksái]

π σ χ ψ

pi [pái] sigma [zígma] chi [kái] psi [sái]

Greek Alphabet

Read capital or upper-case letters as capital *lettername* or cap *lettername*. Read small or lower-case letters as small *lettername*.

Capital	Small	Name	Pronunciation	Corresponding Roman letter
A	α	alpha	á fuh	a
B	β	beta	baý tuh	b
Γ	γ	gamma	gaṁ muh	g
Δ	δ	delta	del tuh	d
E	ϵ	epsilon	eṗ suh lon	e
Z	ζ	zeta	zaý tuh	z
H	η	eta	áy tuh	ē
Θ	θ	theta	thaý tuh	th
I	ι	iota	i oh tuh	i
K	κ	kappa	kaṗ puh	k
Λ	λ	lambda	laṁ duh	l
M	μ	mu	mew	m
N	ν	nu	new	n
Ξ	ξ	xi	zigh or ksigh	x
O	\omicron	omicron	oṁ uh cron	o
Π	π	pi	pie	p
P	ρ	rho	row (as in rowboat)	r, rh
Σ	σ, s	sigma	siḡ muh	s
T	τ	tau	tow (rhymes with cow)	t
Υ	υ	upsilon	uṗ suh lon	y, u
Φ	ϕ	phi	fi (rhymes with hi)	ph
X	χ	chi	ki (rhymes with hi)	ch
Ψ	ψ	psi	sigh or psigh	ps
Ω	ω	omega	oh meḡ uh	ō