Rules for writing mathematics, unit symbols, unit names, and expressing quantities

		Correct	Not correct
Rules about math writing	Mathematical constants and explicitly defined functions must be in roman	$\mathrm{e}^{j2\pi ft}$, $\sin x$	$e^{j2\pi ft}$, $sin\ x$
	Variables must be in italic	$f(x) = x^2$	$f(\mathrm{x}) = \mathrm{x}^2$
	Vectors and matrices are usually in bold italic, lowercase and uppercase resp. (ex : $\boldsymbol{z}$, $\boldsymbol{x}$, $\boldsymbol{y}$ are vectors, $\boldsymbol{A}$ a matrix, β a scalar)	$\boldsymbol{z} = \boldsymbol{A}\boldsymbol{x} + \beta\boldsymbol{y}$	$z = Ax + \beta y$
	Symbols used as subscripts and superscripts are in roman if they are descriptive (ex : Bolzmann constant, nth sample of the sequence x)	k_{B} x_n	k_B x_{n}
	The multiplication of numbers should be denoted with ×, not ·	2×3	$2 \cdot 3$
	The multiplication or division of variables should be denoted using one of the following methods : $ab, a\ b, a \cdot b, a \times b, a/b, \frac{a}{b}, a\ b^{-1}$		
	A dash must not be used to denote a minus sign	$5 - 7 = -2$	5 - 7 = -2
Rules about unit symbols	Unit symbols must be in roman	11 dB	11 *dB*
	Unit symbols are mathematical entities, not abbreviations, thus : ▪ They are not followed by a period, except at the end of a sentence ▪ We must not use the plural ▪ We must not mix unit symbols and unit names within one expression	 13 min 17 min 19 W/m^2	 13 min. 17 mins 19 watts per m^2
	Multiplication of unit symbols must be indicated by a space or ·	W s or W · s	Ws
	Division of unit symbols must be indicated by —, / or negative exponents Brackets must be used to remove ambiguities when several / are used	23 bit/s 29 (°/h)/Hz	23 bps 29 °/h/Hz
	It is not permissible to use abbreviations for unit symbols. The use of the correct symbols for SI units is mandatory	31 s 37 min 41 h 43 K 47 g 53°	31 sec 37 mn 41 hr 43 °K 47 gr 53 deg
Rules about unit names	Unit names must be in roman, and they are treated like ordinary nouns	59 seconds	59 *seconds*
	Unit names begins with a lower-case letter, even for units named after someone	61 watts	61 Watts
	When a prefix is used, no space or hyphen is used between the prefix and the unit name, they form a single word	67 millivolts	67 milli-volts
Rules about quantities	There is always a non-breaking space between a number and a unit symbol. The only exceptions are the degree, minute, and second for plane angle (°, ', and ")	71 MHz 73 °C 79°	71MHz 73°C 79 °
	When the value of a quantity is used as an adjective, there is a (non-breaking) space between the numerical value and the unit symbol.	a 83 dB gain	a 83-dB gain
	The decimal marker shall be either the point or the comma. The choice depends on the context	89.97 (EN) 89,97 (FR)	89,97 (EN) 89.97 (FR)
	For numbers with many digits : ▪ The digits may be divided into groups of three by a thin (non-breaking) space ▪ Neither dots nor commas are inserted in the spaces between groups of three ▪ With four digits, it is customary not to use a space to isolate a single digit	101 103 107 1009	101,103,107 1 009
	There is always a (non-breaking) space between a number and the symbol %	113 %	113%
Prefixes	Prefix symbols must be in roman, and attached to the unit symbols	127 km	127 *k*m
	It is not permissible to use a prefix symbol different than the SI prefix symbols	131 kHz 137 µs	131 KHz 137 us
	The SI prefixes refer strictly to powers of 10. They must not be used to indicate powers of 2. The IEC has adopted prefixes for binary powers in the international standard IEC 60027-2:2005	1 kbit = 1000 bits 1 Kibit = 1024 bits	1 kbit = 1024 bits

List of prefixes													
	Factor	10^3	10^6	10^9	10^{12}	10^{15}	10^{18}	2^{10}	2^{20}	2^{30}	2^{40}	2^{50}	2^{60}
	Name	kilo	mega	giga	tera	peta	exa	kibi	mebi	gebi	tebi	pebi	exbi
	Symbol	k	M	G	T	P	E	Ki	Mi	Gi	Ti	Pi	Ei

Sources : BIPM, http://www.bipm.org/utils/common/pdf/si_brochure_8_en.pdf
NIST, http://physics.nist.gov/cuu/pdf/sp811.pdf

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