

Mathematical Symbols

Symbol	Meaning	Symbol	Meaning
Δ	(Greek <i>delta</i>) change in some quantity	\leq	less than or equal to
Σ	(Greek <i>sigma</i>) sum of quantities	\propto	is proportional to
θ	(Greek <i>theta</i>) any angle	\approx	is approximately equal to
$=$	equal to	$ n $	absolute value or magnitude of
$>$	greater than	\sin	sine
\geq	greater than or equal to	\cos	cosine
$<$	less than	\tan	tangent

Quantity Symbols Used Throughout

Symbols that are **boldfaced** refer to vector quantities that have both a magnitude and a direction. Symbols that are *italicized* refer to quantities with only a magnitude. Symbols that are neither are usually units.

Symbol	Quantity
A	area
D	diameter
\mathbf{F}, F	force
m	mass
M	total mass
R	radius (of a spherical body, a curved mirror, or a curved lens)
r	radius (of sphere, shell, or disk)
t	time
V	volume