

# Basic Notations

$\rho(X, l)$	The distance from the point $X$ to the line $l$ .
$\rho(X, \Pi)$	The distance from the point $X$ to the plane $\Pi$ .
$AB \# CD$	The segments $AB$ and $CD$ are parallel and equal.
$\sup X$	Supremum of the set $X$ .
$M \equiv N$	The points $M$ and $N$ coincide.
$M \not\equiv N$	The points $M$ and $N$ do not coincide.
$(ABC)$	The plane containing points $A, B, C$ .
$\Phi \subset \Phi_1$	All points of the figure $\Phi$ are inside the figure $\Phi_1$ .
$\Phi \subseteq \Phi_1$	The figure $\Phi$ is covered by the figure $\Phi_1$ .
$AB \cap CD = X$	The lines $AB$ and $CD$ intersect at point $X$ .
$\widehat{ABC}$	The arc $ABC$ .
$[AB]$	The segment $AB$ .
$S_{A_1A_2 \dots A_n}$	The area of the polygon $A_1A_2 \dots A_n$ .
$P_{A_1A_2 \dots A_n}$	The perimeter of the polygon $A_1A_2 \dots A_n$ .
$\omega(O, R)$	A circle with a center $O$ and radius $R$ .
$R$	The set of real numbers.
$[a]$	The whole part of the number $a$ .
$\{a\}$	The fractional part of the number $a$ .

## Notation for the Elements of Triangle $ABC$

$a, b, c$	The lengths of the sides $BC, AC, AB$ .
$p$	The half-perimeter of the triangle.
$S_{ABC}$ or $S$	The area of the triangle.
$\alpha, \beta, \gamma$	The values of the angles at the vertices $A, B, C$ .
$m_a, m_b, m_c$	The lengths of the medians drawn from the vertices $A, B, C$ .
$h_a, h_b, h_c$	The lengths of the altitudes drawn from the vertices $A, B, C$ .
$l_a, l_b, l_c$	The lengths of the bisectors drawn from the vertices $A, B, C$ .
$r$ and $R$	The inradius and circumradius of the triangle.
$r_a, r_b, r_c$	The radiuses of the excircles.

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