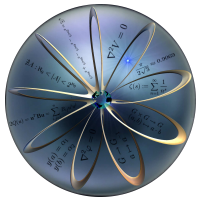

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## linear ordered geometry

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|---|---|
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An incidence geometry $A = (P, n, I)$ is a *linear ordered geometry* if there is a strict betweenness relation $B$ defined on the points $P_0$ of $A$, such that

Col1 $(p, q, r) \in B$ only if $p, q$, and $r$ are collinear (all incident with a common line $\ell \in P_1$);

Col2 for any pairwise distinct collinear points $p, q, r$, at least one of $(p, q, r)$, $(q, r, p)$, or $(r, p, q) \in B$,

We denote the linear ordered geometry by $(A, B)$.