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Non-Euclidean versions of some classical triangle inequalities

We present the hyperbolic and spherical versions of some well known classical triangle inequalities. Among others, we show the versions of the Euler's inequality ($R > 2r$), the Finsler-Hadwiger's inequality, the so called "fundamental triangle inequality" and others.

We also show how to prove the cosine-law type inequality without referring to the comparison theorem on Riemannian manifolds.