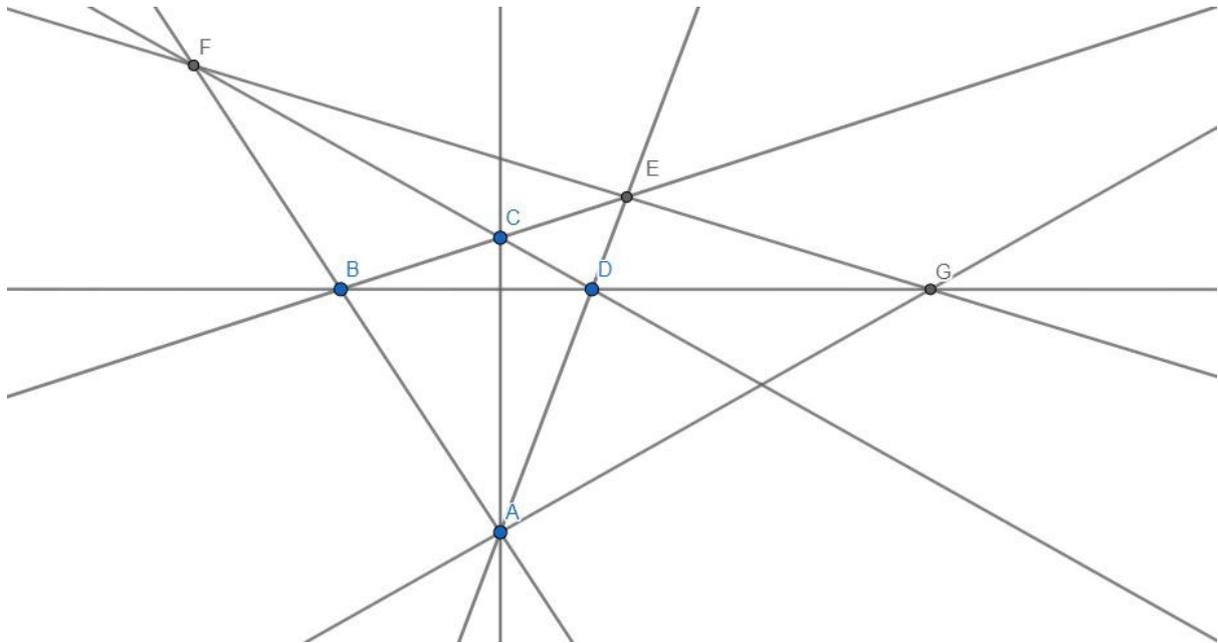


Harmonical

Given three diverging lines, how to find the fourth harmonical?



The lines AB, AC and AD diverge. If E is on BC and AD, and F is on AB and CD, and G is on EF and BD, then AG is the fourth harmonical.

The point G does not depend on the choice of C, and the line AG does not depend on the choice of B,D (as long as B,C,D are on the given lines, and are not equal to A).

Note that the points on any line which intersects the four lines through A are harmonic conjugates. For example, if H is the intersection of BD and AC, then H,G are harmonic conjugates with respect to B,D.