Ceva, version1.0, 2022-10-31

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Let ABC be a triangle, DEF points on the segments BC, AB, CA respectively. Ceva’s theorem now states that the lines through AD, BE and CF (the so-called “Cevians”) intersect in a common point iff

This program illustrates Ceva’s theorem. You can move the three vertices with the mouse or with the arrow keys. The points D,E,F then will be constructed such that the above ratios are kept constant. Or you can move the points D,E,F with the arrow keys. The new ratios will then be displayed. If the lines through AD, BE and CF are parallel, the product of the ratios will also be 1. Well-known examples for Cevians are the medians, angle bisectors and altitudes of a triangle. You can display them via the corresponding menu points.

Controls:

arrow keys: move the point marked by a red circle

Tab toggle the mark through the points

[a]…[f] mark point A,…,F

[\*] zoom in

[/] zoom out

[u] move picture up

[v] move picture down

[l] move picture left

[r] move picture right

[l] move picture left

[u] move picture up

[v] move picture down

[4],[6],[2],[8] move marked point (by a small amount)

[+] extend lines

[-] shorten lines

[n] start from scratch