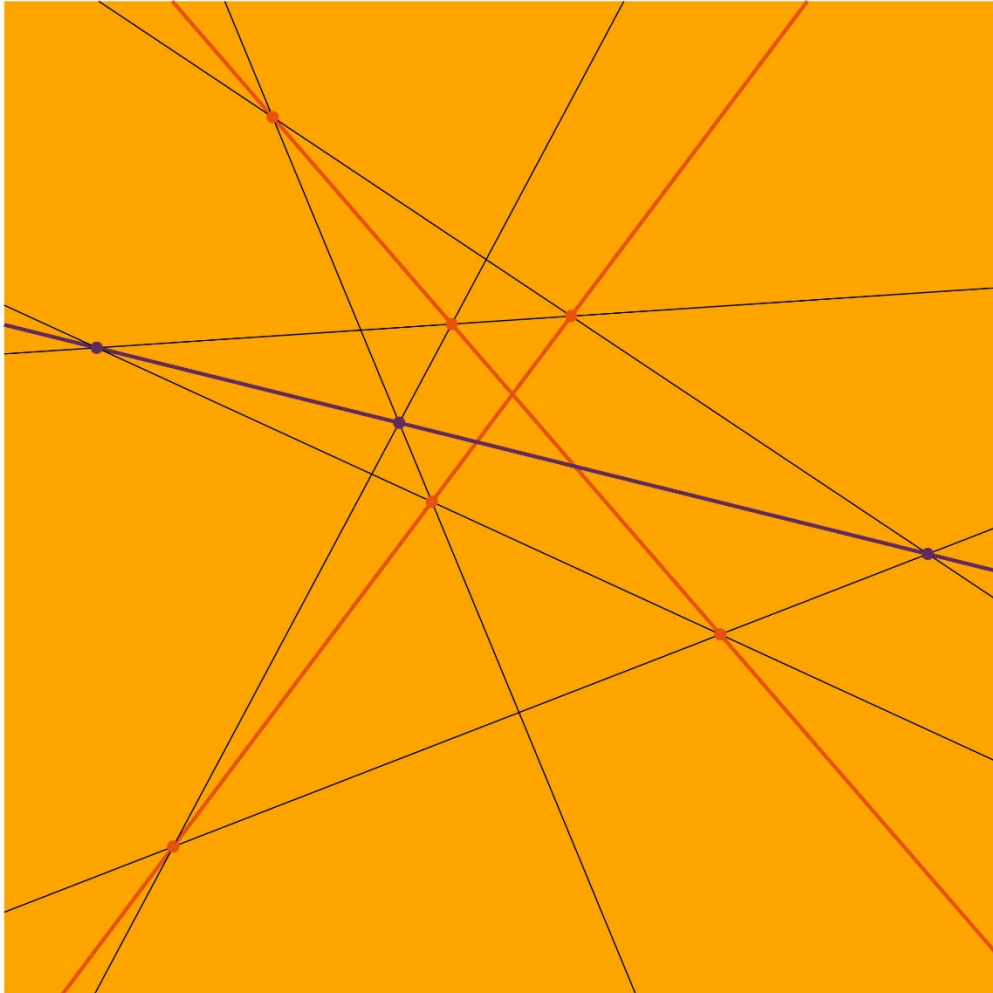


The Pappus configuration



Pappus of Alexandria (290-350) was a Greek mathematician, a teacher and prolific writer, who wrote mainly about the works of others but had a sharp eye for mathematical gems which may have been lost otherwise.

The Pappus configuration, of nine points and nine lines, eventually lead to the development of projective geometry.

Take two lines l and l' (orange), such that each line contains three points; l contains a, b, c and l' contains a', b', c' . Consider the three pairs of lines $ab'-a'b$, $bc'-b'c$, and $ac'-a'c$ (black). Their intersection points are on a straight line (purple).

Thus we have nine lines with three points each, and three lines through each of the nine points.