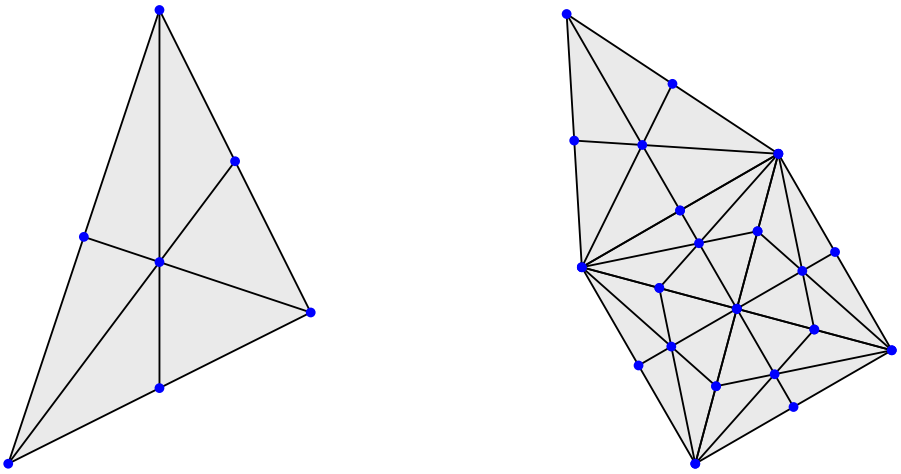
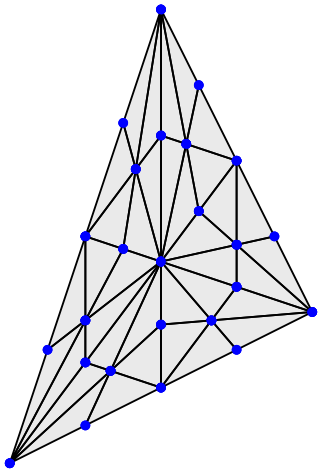
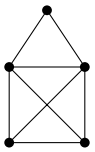
Motivating examples using `\subdiv`:



Now we use `\subdivrec` to draw the second barycentric subdivision of a triangle (i. e. the barycentric subdivision of its barycentric subdivision):

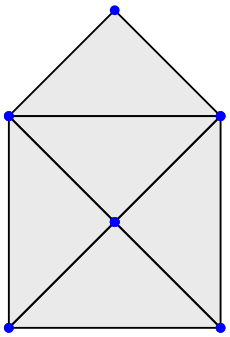


In Germany we have a riddle for children: draw a "Haus vom Nikolaus"[1] (house of St. Nicholas) without lifting the pen from the paper and without drawing any line twice. Mathematically put: find an Eulerian path in the following graph:

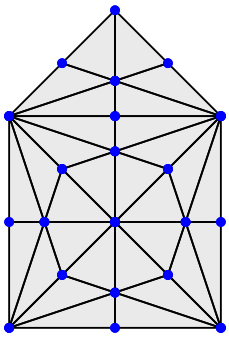


(note that there is *not* a graph vertex at the intersection of the two diagonal lines).

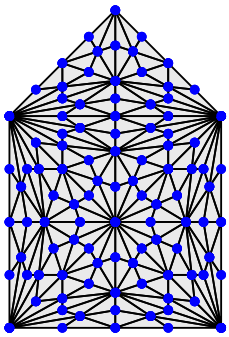
Now we put an extra vertex at the crossing in the middle and interpret the figure as a composition of five 2-simplices ("filled triangles"). Then resulting complex in its n-th barycentric subdivision can be drawn via `\nikolausresidenz{n}`:



$n = 0$



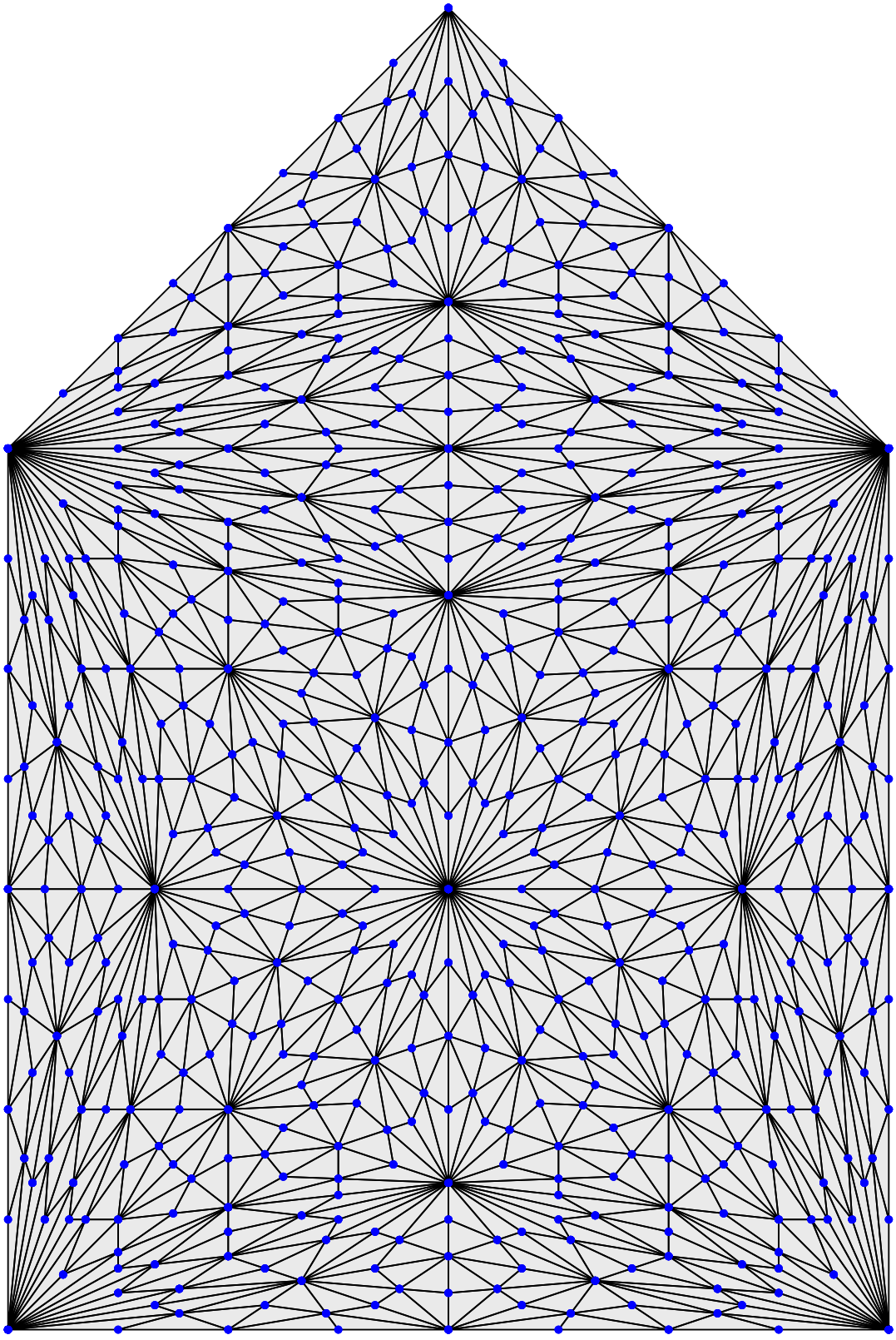
$n = 1$



$n = 2$

`\nikolausresidenz{3}` on the next page:

[1] `http://de.wikipedia.org/wiki/Haus_vom_Nikolaus`



$n = 3$