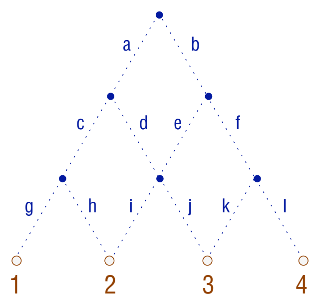

Figure 7: The graph G_4.

Second proof. We prove that $\mathcal{T}_{n,3}$ is cotransversal. Let G_n be the directed graph whose set of vertices is the triangular array $T_{n,3}$, where each dot not on the bottom row is connected to the two dots directly below it. Label the dots on the bottom row $1, 2, \ldots, n$. Figure 7 shows G_4; all the edges of the graph point down.

There is a bijection between the rhombus tilings of the holey triangles of size n, and the routings (sets of n non-intersecting paths) in the graph G_n which end at vertices $1, 2, \ldots, n$. This correspondence is best understood in an example; see Figure 8. We leave it to the reader to check the details.

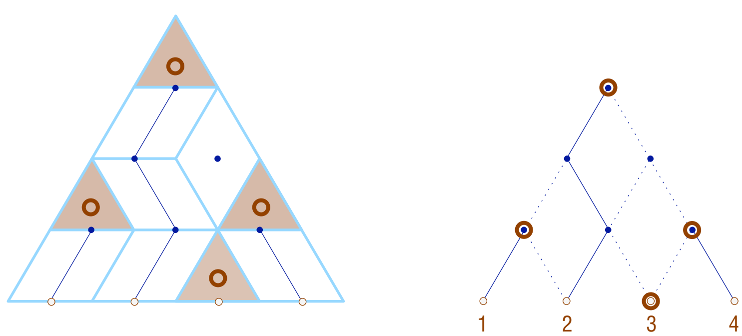

Figure 8: A tiling of a holey $T(4)$ and the corresponding routing of G_4.

In this correspondence, the holes of the holey triangle correspond to the starting points of the n paths in the graph. From Corollary 6.3, it follows that $\mathcal{T}_{n,3}$ is the cotransversal matroid $L(G_n, [n])$. □