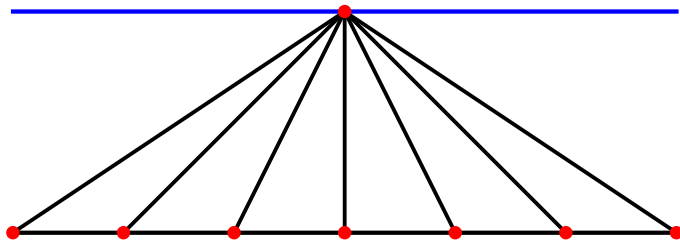


Tiled floors with a horizontal leading edge (improved version)

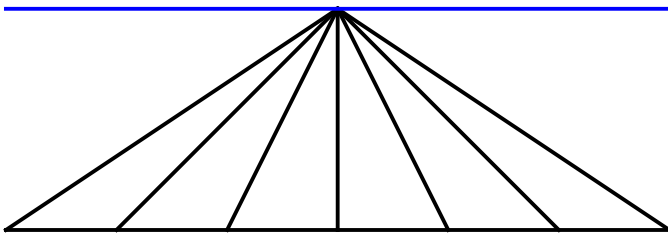
If we have a compass, or other means of measuring distances, we can construct a tiled floor with leading edge parallel to the horizon: choose the “point at infinity” on the horizon, and the leading edge tile spacing



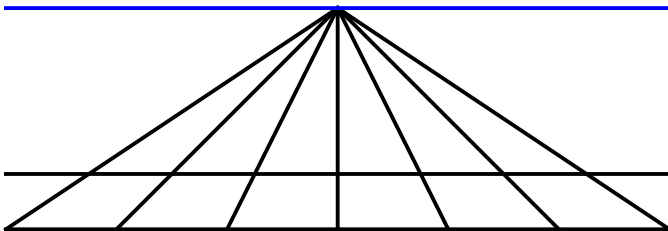
Draw the tile edges perpendicular to the horizon by connecting the equally spaced points on the leading edge to the point at infinity



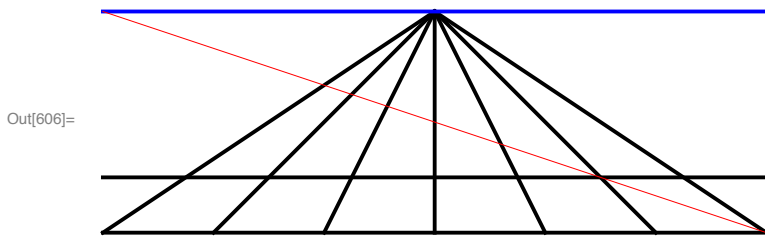
Erase the dots



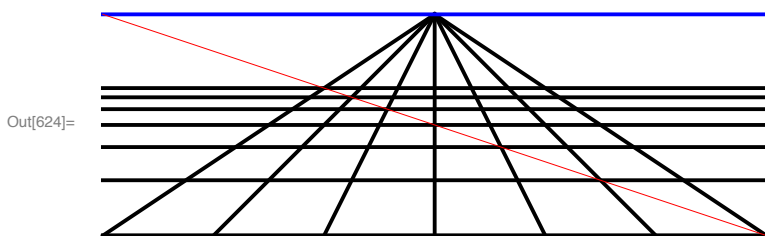
Now choose the “depth” of the first row of tiles



To determine the correct depths of all other rows, draw a line passing through the diagonal of one of the tiles, and extending to the horizon. (As pointed out in class, starting from the far left or far right tile enables you to do as many rows as possible with one diagonal. Thanks!)

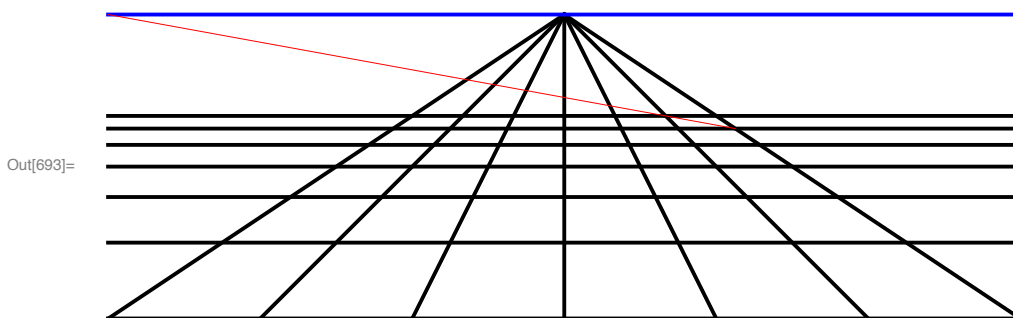


This line must pass through the diagonal of one tile on each successive row, which determines the far corner of that tile, and thus the depth of the row

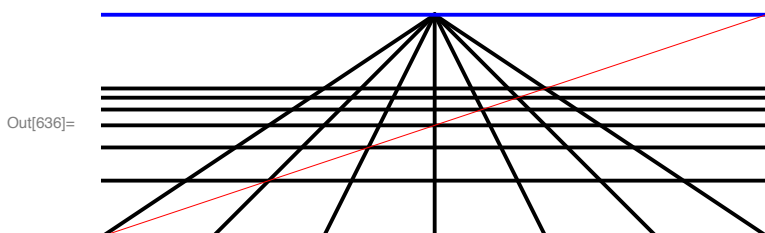


When you've run out of tiles in the front row, move out to the last complete row and start over.

(Thanks for for the correction!)

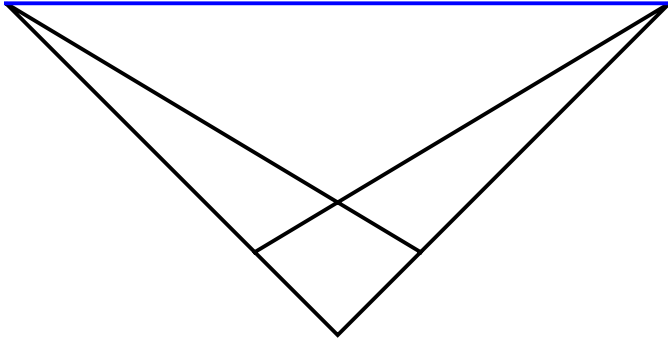


You could just as well construct your diagonal going left to right:

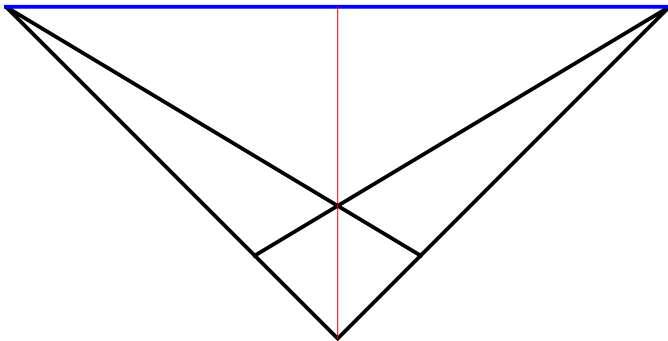


Tiling the floor using only a straightedge

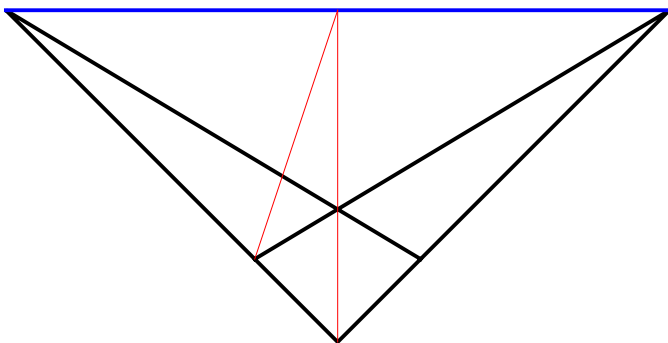
Begin with a horizon (blue) and two pairs of "parallel" lines - each pair meet at the infinitely distant horizon



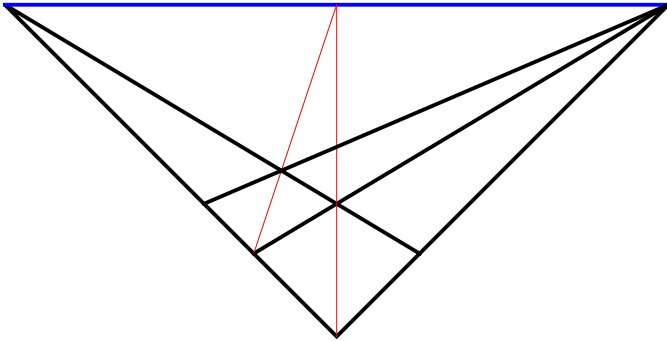
Now construct the next tile to the left: draw the infinite line (red) passing through the diagonal of the first tile



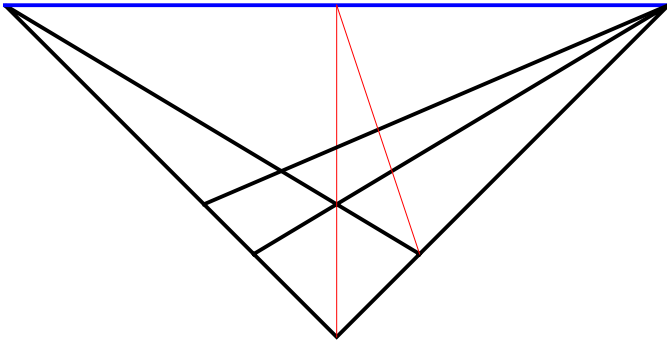
The infinite line through the diagonal of the next tile should be parallel to the diagonal of the first tile, so they meet at the horizon



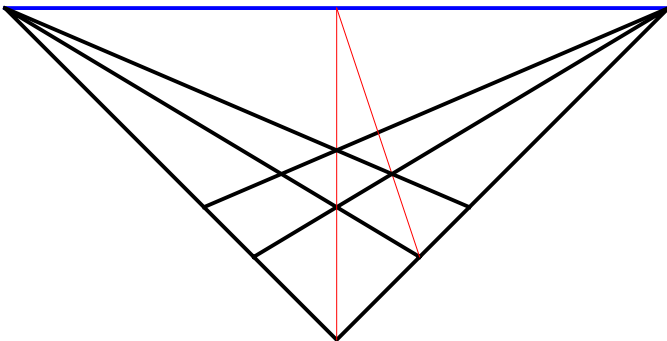
The infinite line through the distant side of the next tile should be parallel to the corresponding sides of the first tile, so *they* meet at the horizon. The new tile is complete.



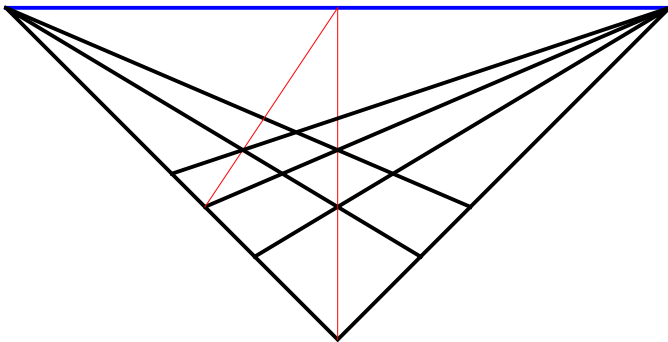
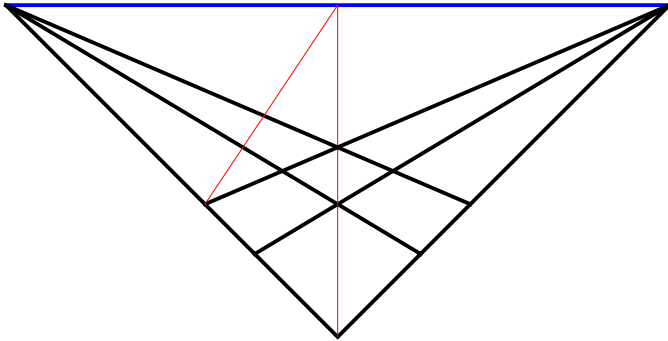
Now construct the next tile to the right: draw the infinite line that should pass through the diagonal of this tile



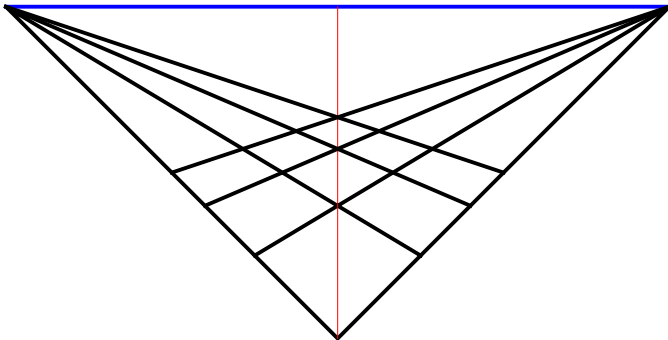
The missing side of the new tile needs to be parallel to the corresponding existing side



Repeat, first on one side



then on the other



Continue towards the horizon to the desired resolution.