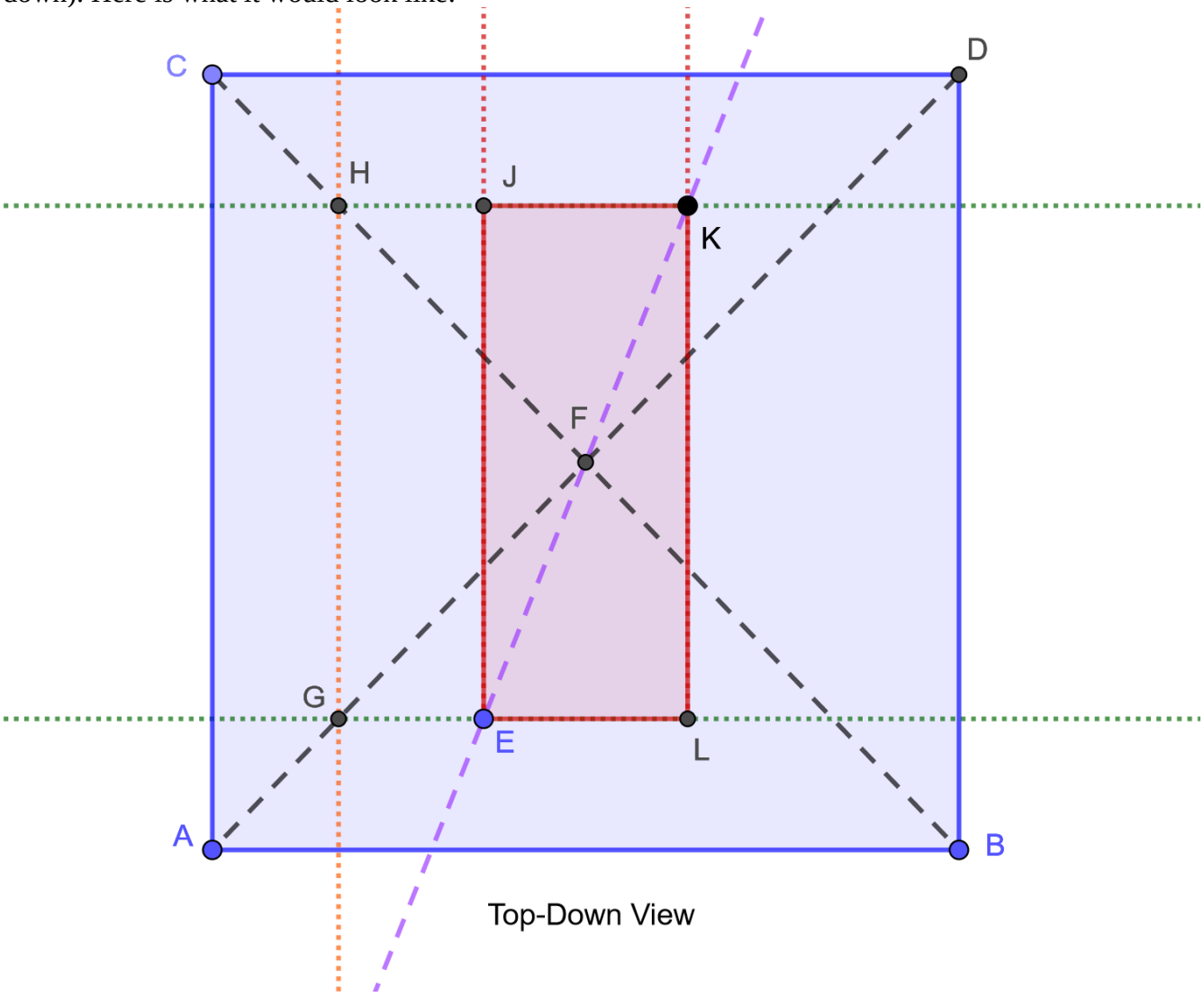
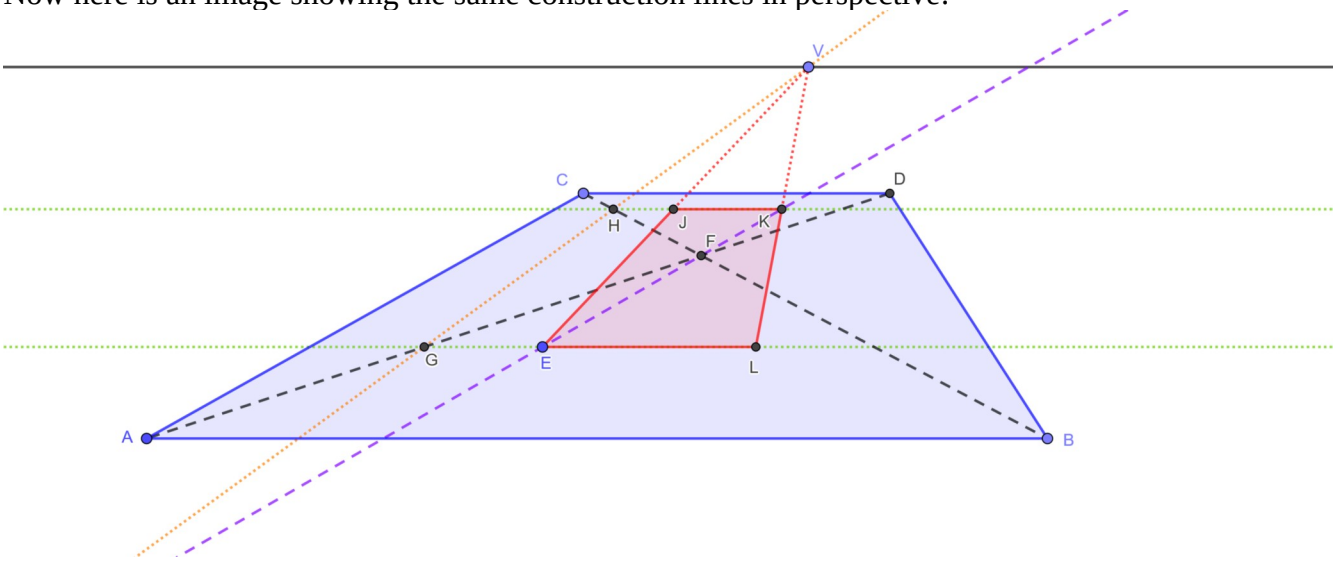
In this exercise, you will start with an image of a rectangle on the ground in one point perspective. The goal is to construct another rectangle centered inside the given one. The rectangles will not have the same proportions (this means you cannot assume the inside rectangle has its vertices on the diagonals of the given rectangle).

This document will give you some guidance on how to do the construction. As is usually the case, it is helpful to visualize the desired construction from a non-perspective point of view (in this case top-down). Here is what it would look like:



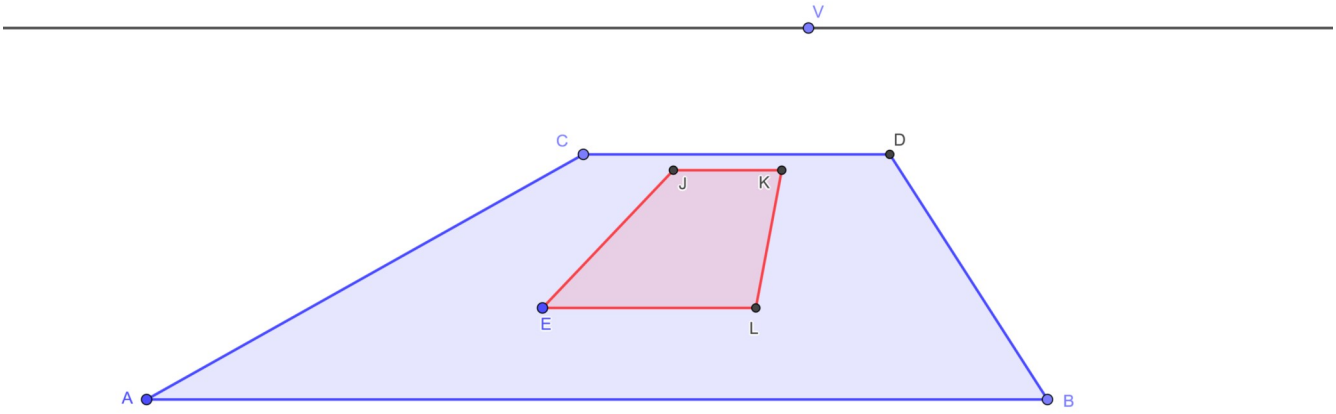
The rectangle ABCD is the given rectangle; the point E is the corner of the inside rectangle. Note that E should be able to move freely. You should be able to think of how you would use those given points to construct points F, G, H, J, K, and L in that order. Then you would have the vertices of the desired inner rectangle EJKL.

Now here is an image showing the same construction lines in perspective:



Again, think of the steps you would take to construct F, G, H, J, K, and L.

Finally, I'll ask you to hide the construction lines, just leaving the rectangles, the horizon, and the principal vanishing point. It should look like this:



You should check that the only movable points at the end are the original movable points, and the perspective should remain correct as they are moved.