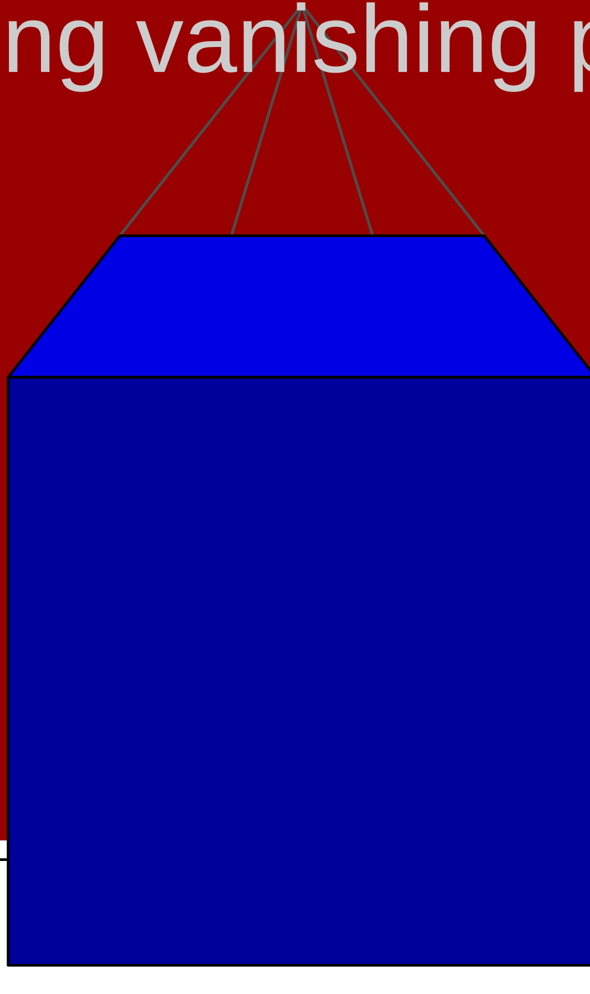
PERSPECT

using vanishing p



This text is based on perspective as used by the masters of the rena
points for drawing a cube. Although there are no numbers, the proce
and the concept of euclidean space. The numbers are contained in t
unimportant. What is important is the relationships of the lines to eac
calculations involved, it should be possible for anybody to learn pers
In fact, it is entirely feasible to teach a ten year old child all the rules
of the limitations imposed by applying numbers and abstract variable
relationships. The invention of perspective cannot be credited to one
contributors was Leon Battista Alberti (1404 — 1472) who was one o
Giotto di Bondone (c. 1267 - 1337) also deserves credit for painting

The Horizon:

Draw a straight line through the approximate center of the page. you
and it need not be parallel to the bottom of the page; however, the h
eyelevel. If you put it near the bottom, it will appear as if you are loo
the top, it will appear as if you are looking down. If the horizon line is
like the viewer is tilted or standing on a tilted surface.

The Vanishing-Point:

Pick a point on the horizon line near the center. This is the point to w
to the plane of the page will converge. This is called "single-point pe
a special case of "three-point perspective," which will be explained la
works well for drawing things in a limited depth of field, where object
as the viewer.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Drawing a cube using a single vanishing point:

The front and the back face of the cube must appear to be squares,
picture plane. It is easiest to start with the front face.


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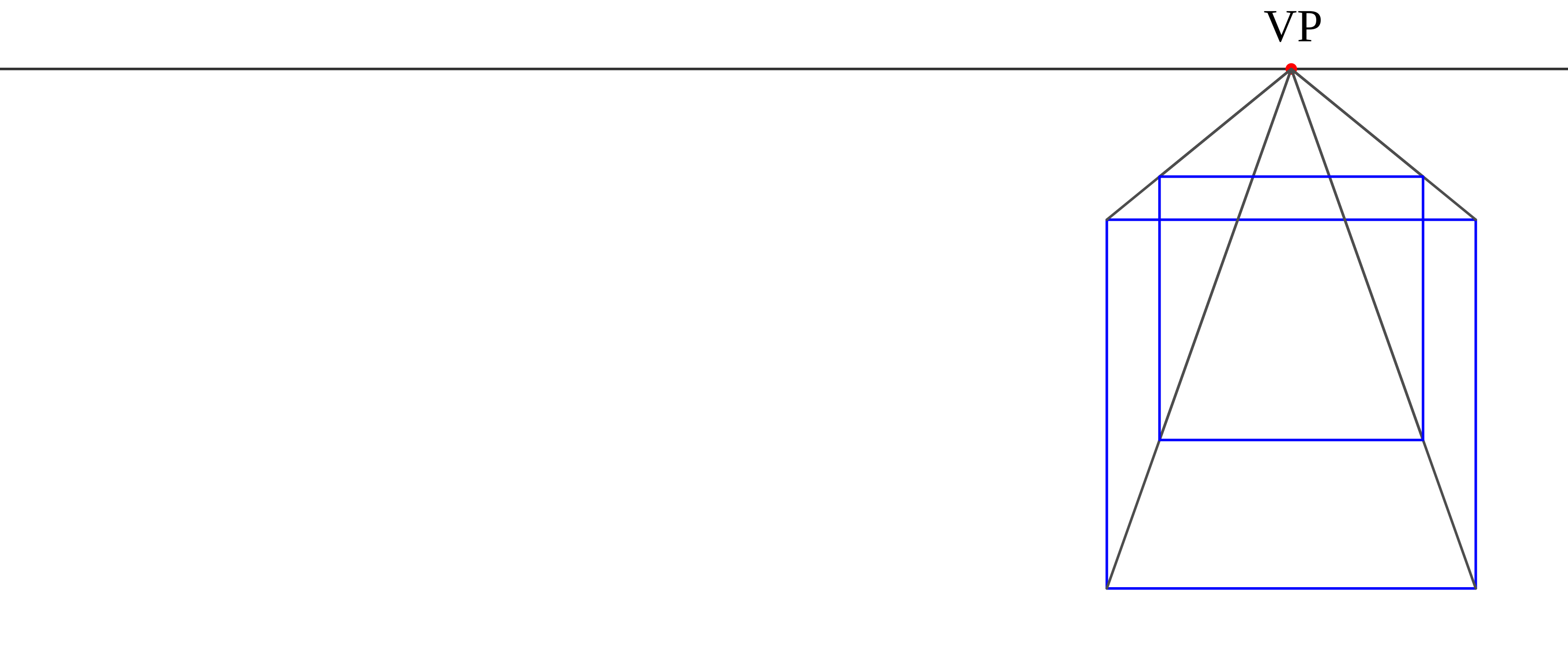
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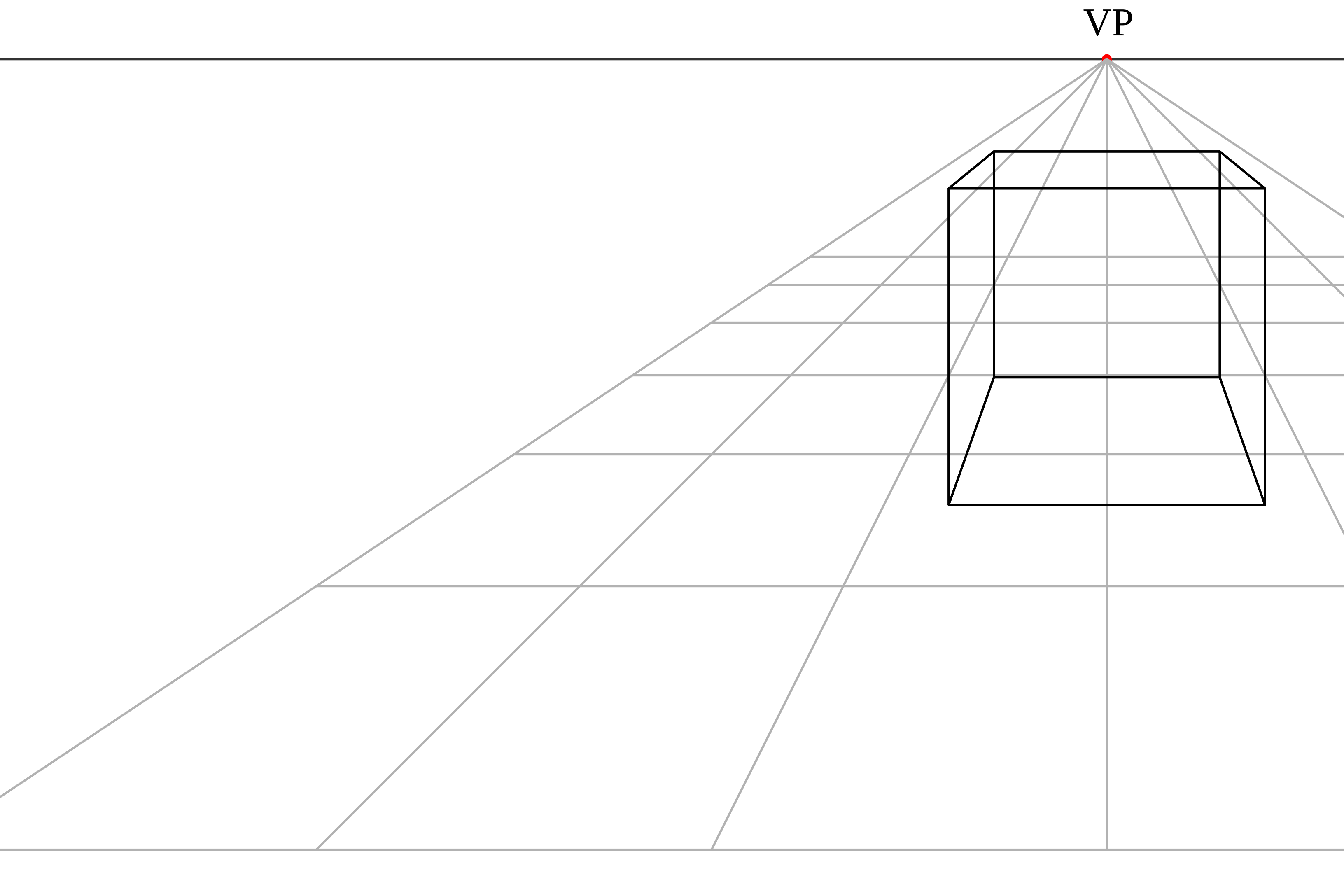
Now draw a line from each corner of the square to the vanishing-poi
the cube arbitrarily within the diverging lines.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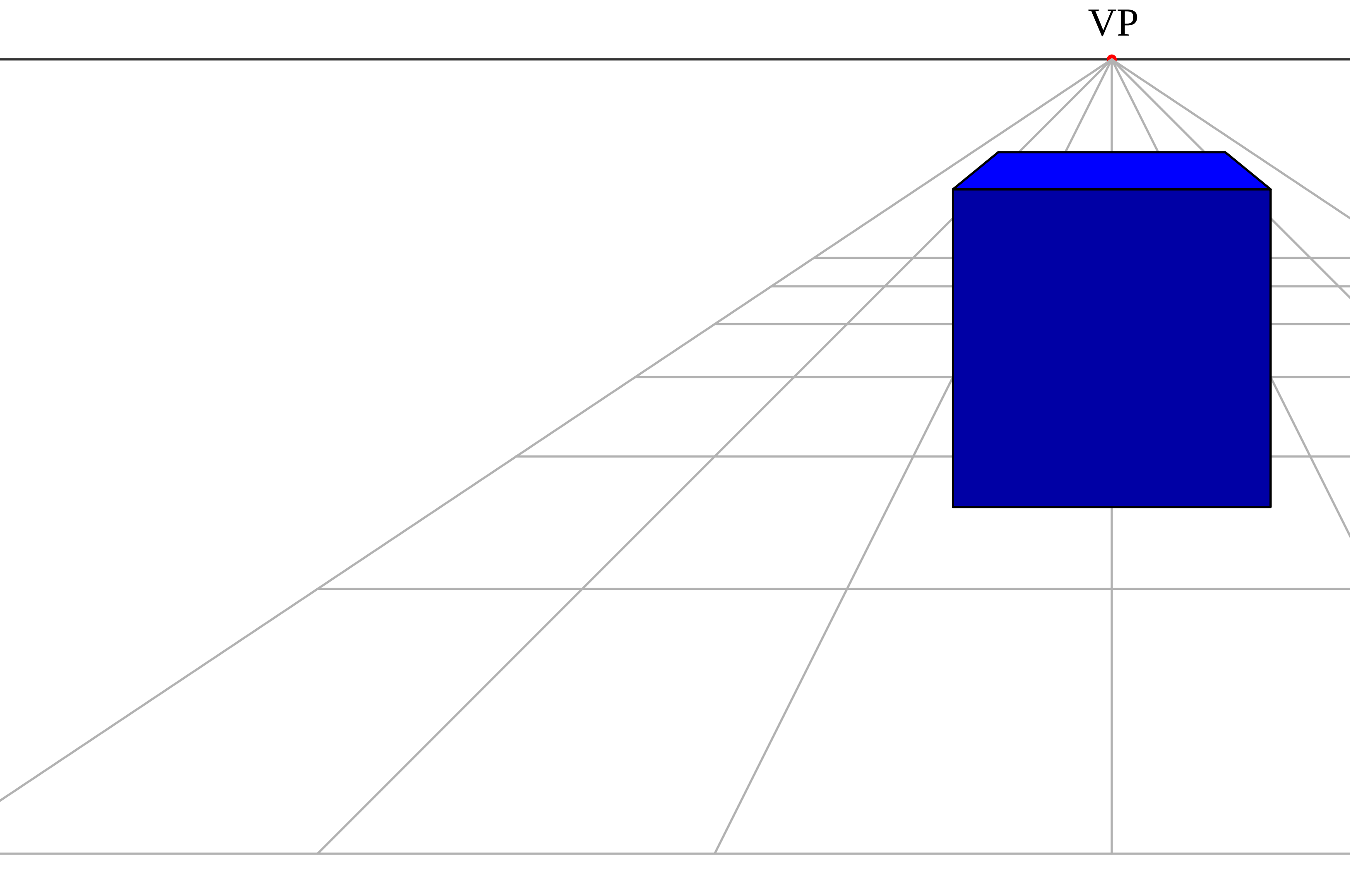
Here I have added a grid to indicate the floor. It is still ambigious wh
or above it. To solve this a shadow is required. An in depth treatmen
will be left for another occasion.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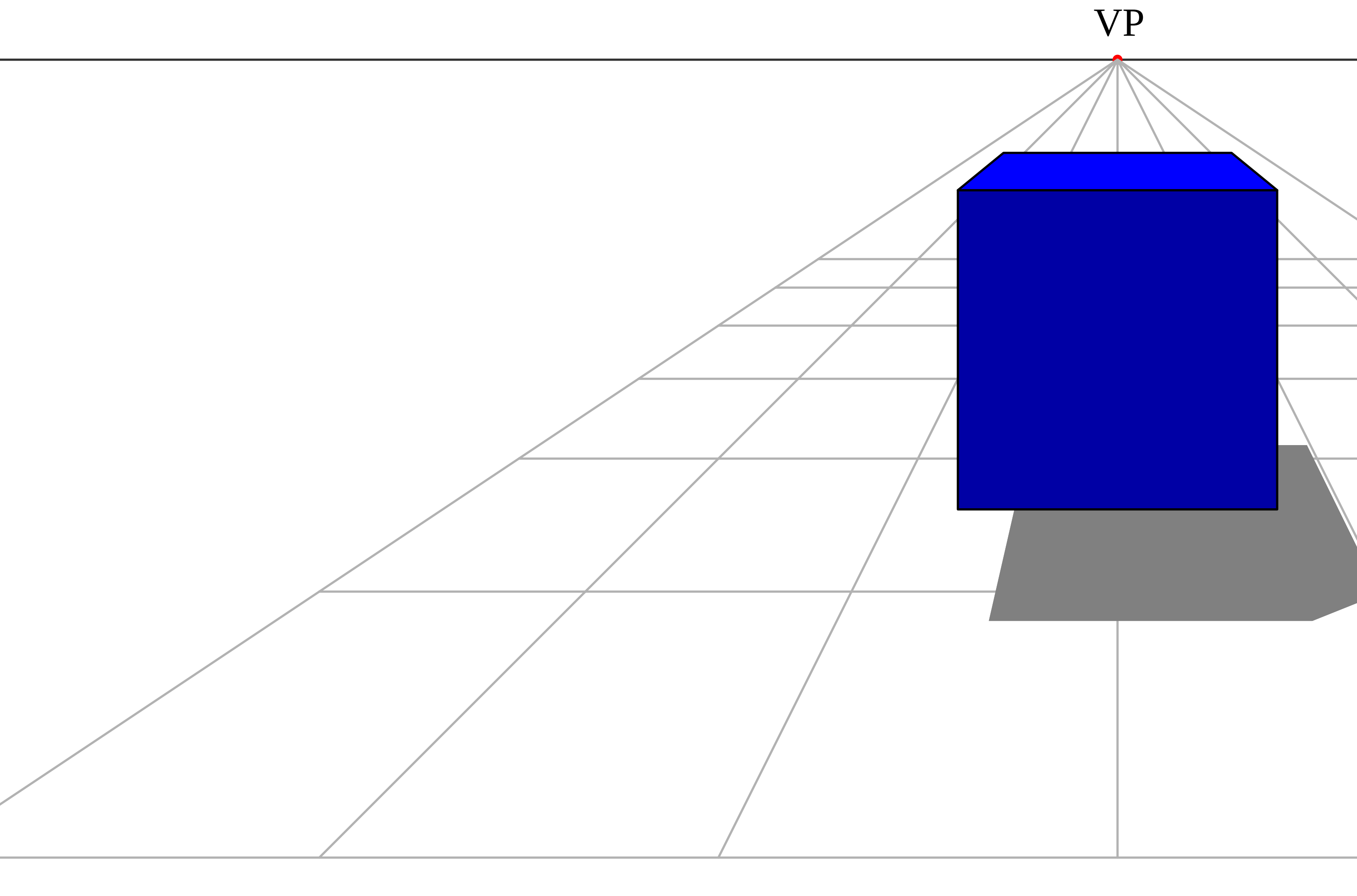
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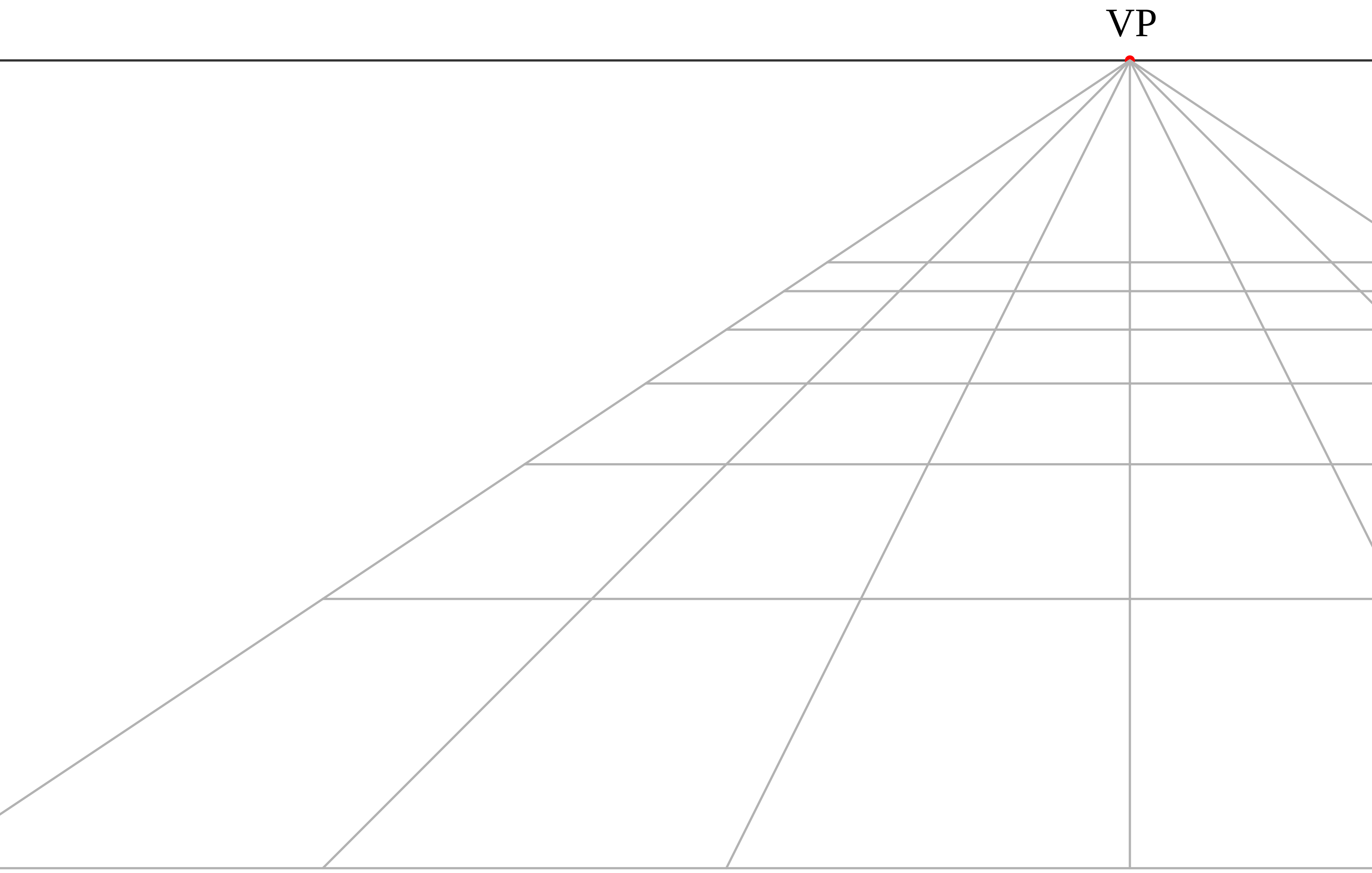
Notice that if the cube is constructed very far to the side of the page
limit of the single point approximation. If the front face of the cube is
then in reality, that is the only face we should see and the other side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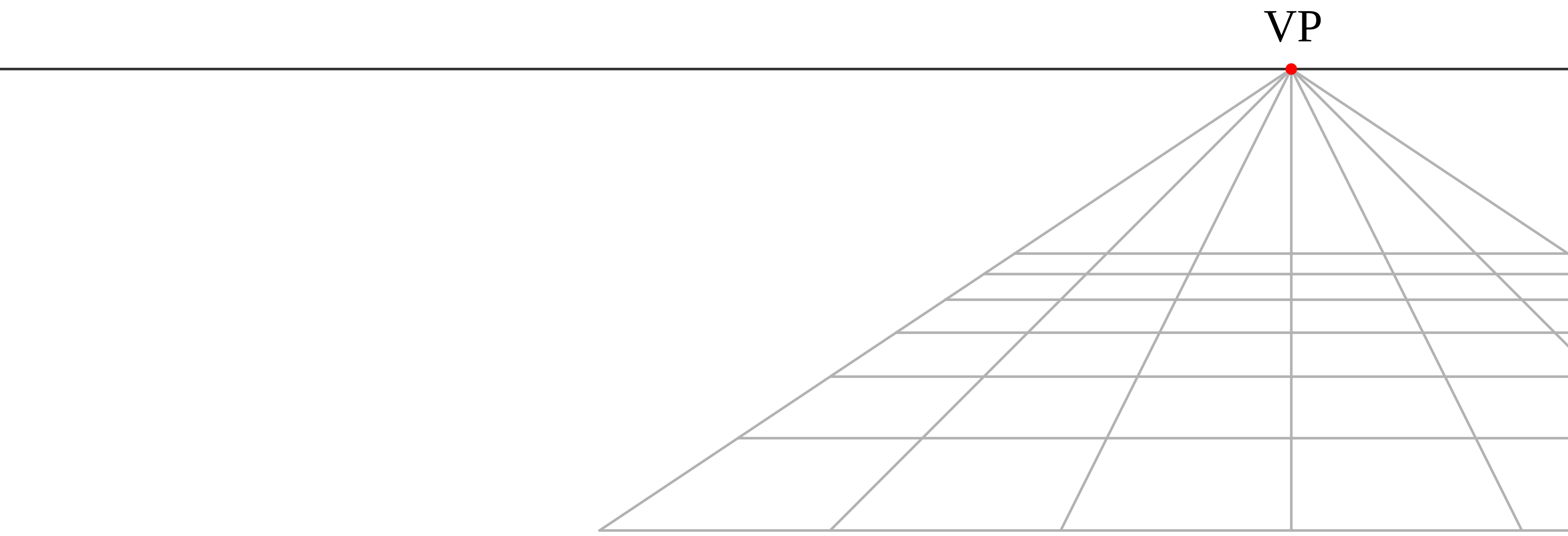
Single-point perspective is a special case of two-point perspective, w
at infinity. By rotating around the vertical axis, the second vanishing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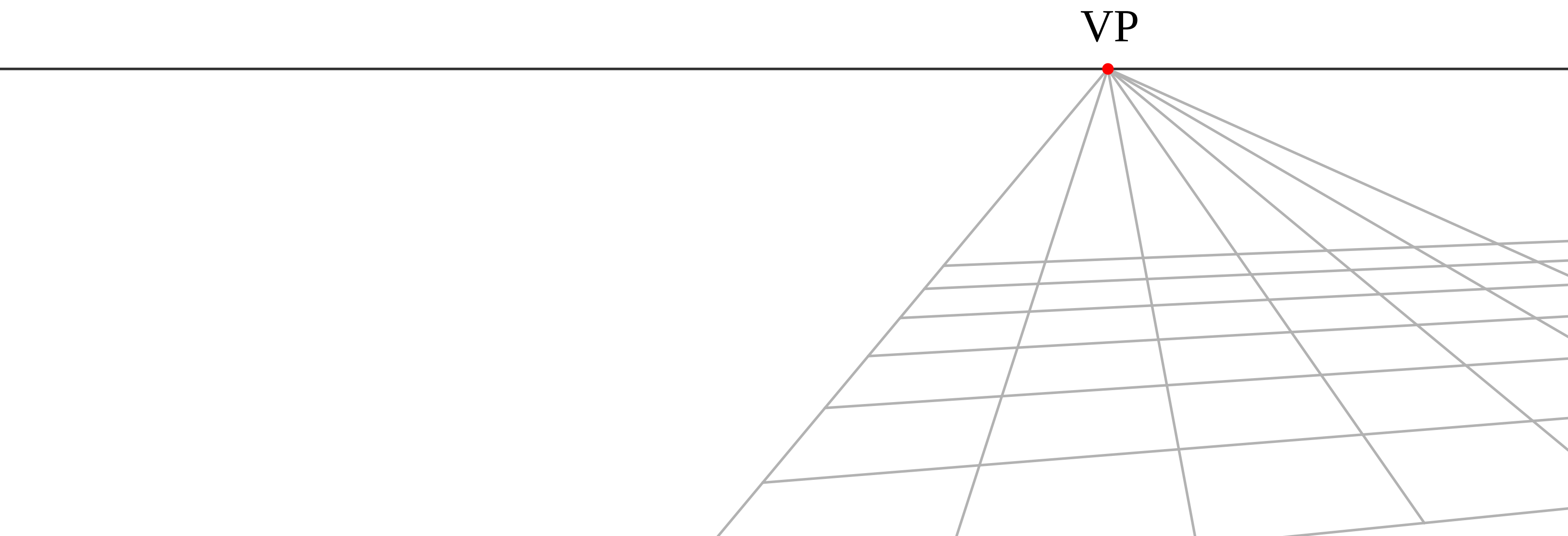
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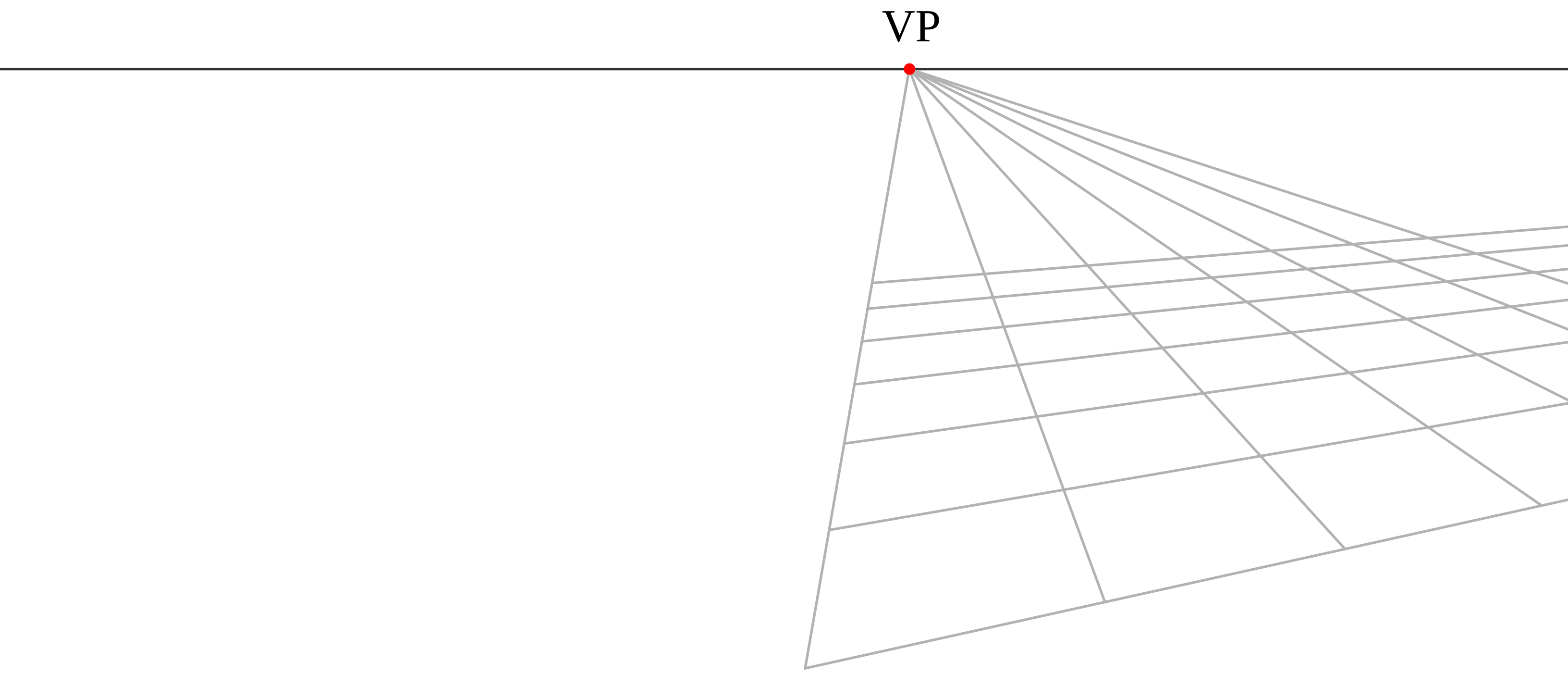
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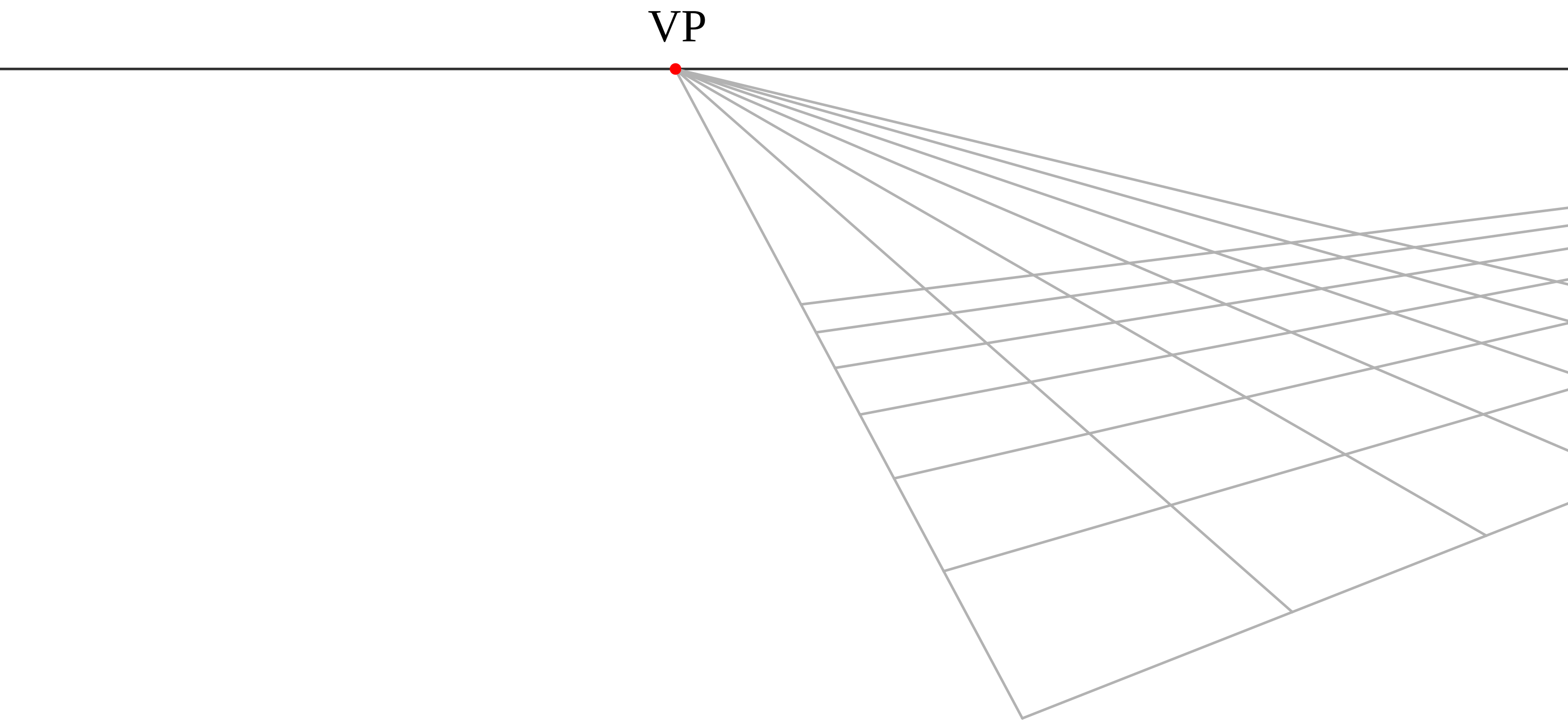
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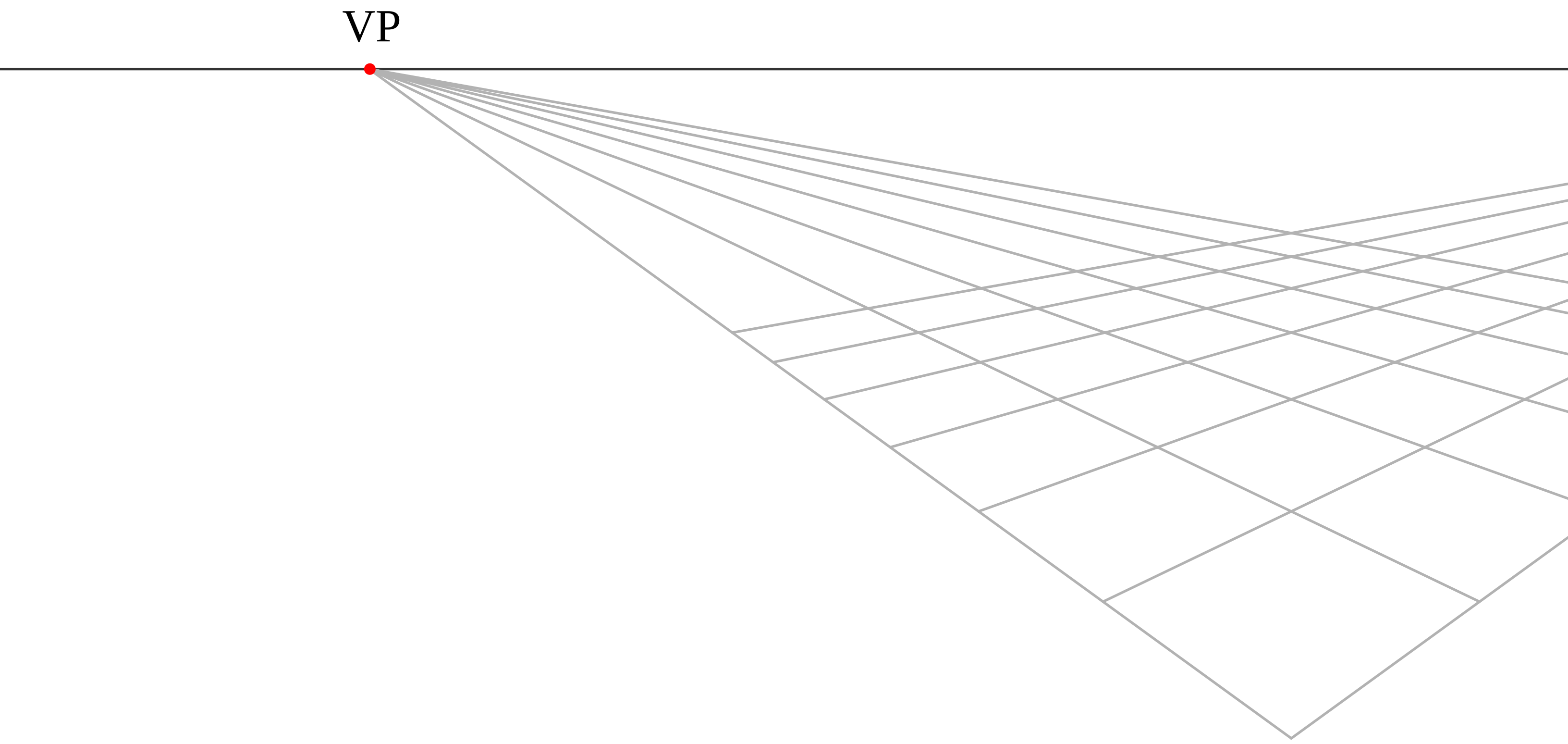
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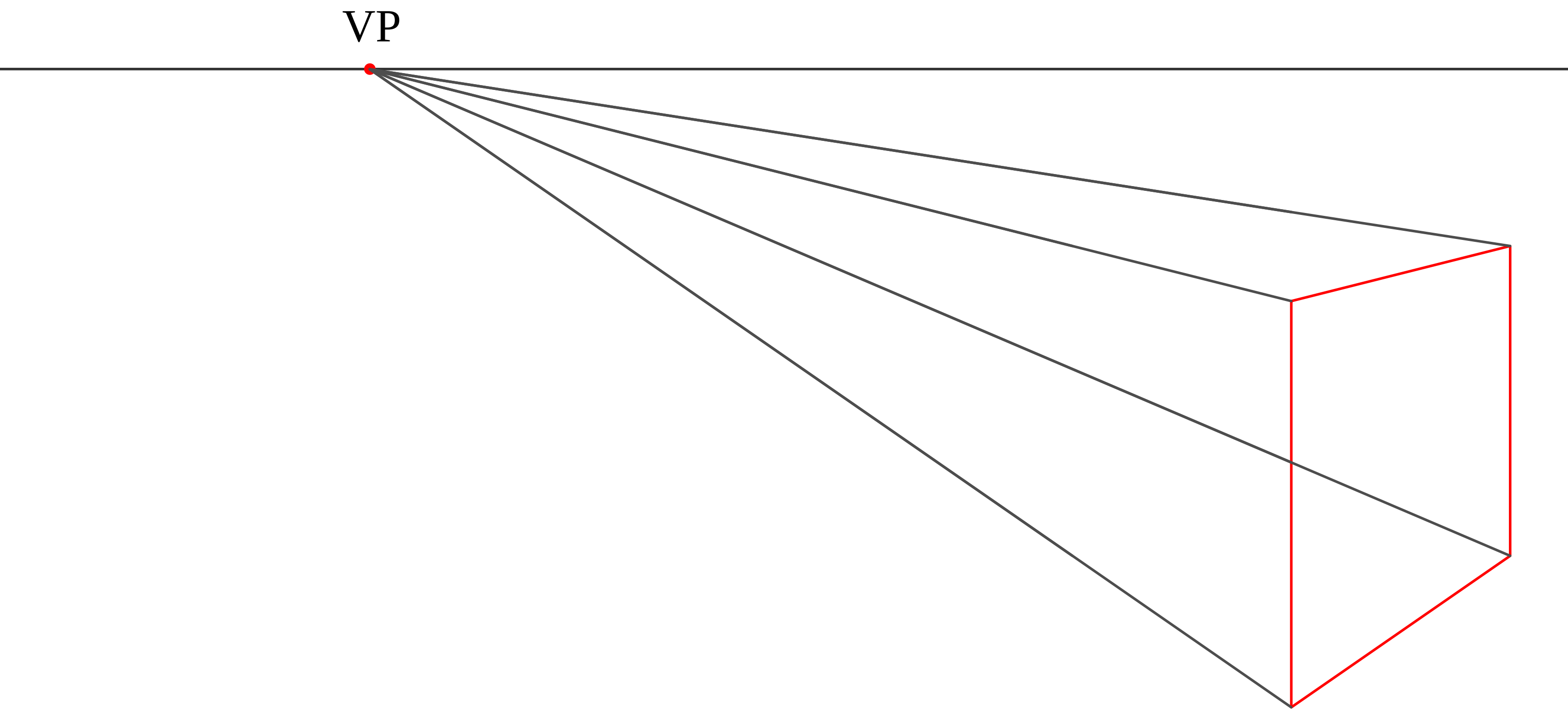
Two-point perspective:

Now there are two axes converging on the page. Instead of the front
to the picture plane as in single-point perspective, the four vertical e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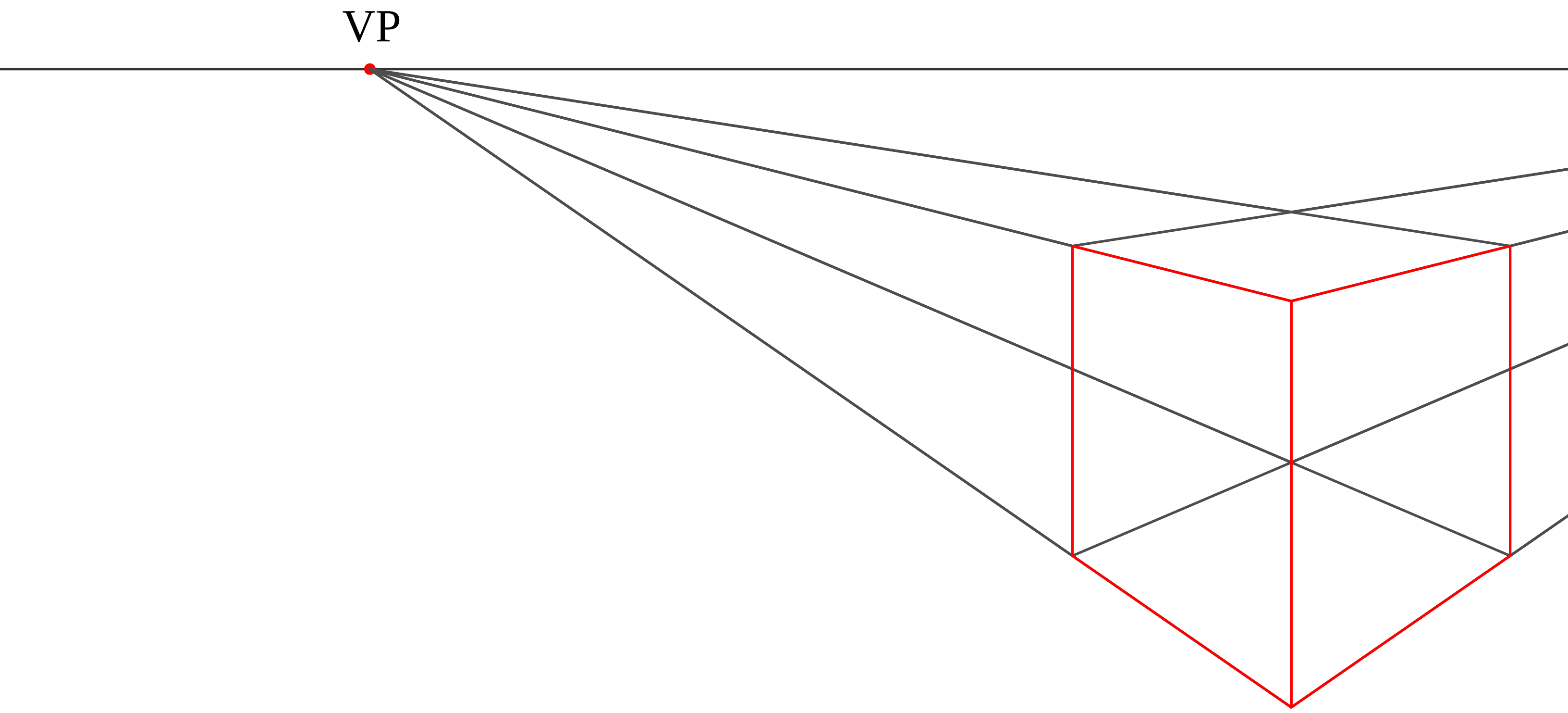
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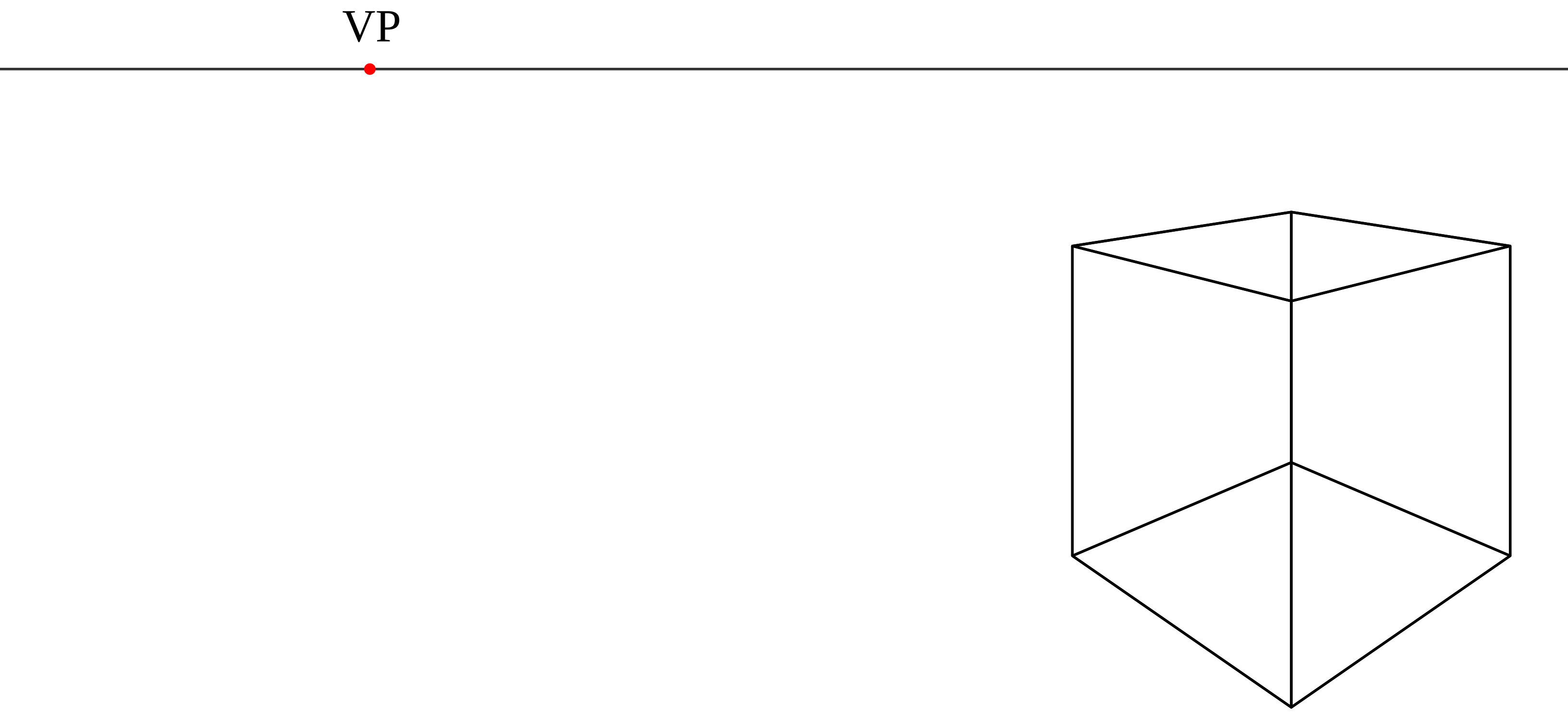
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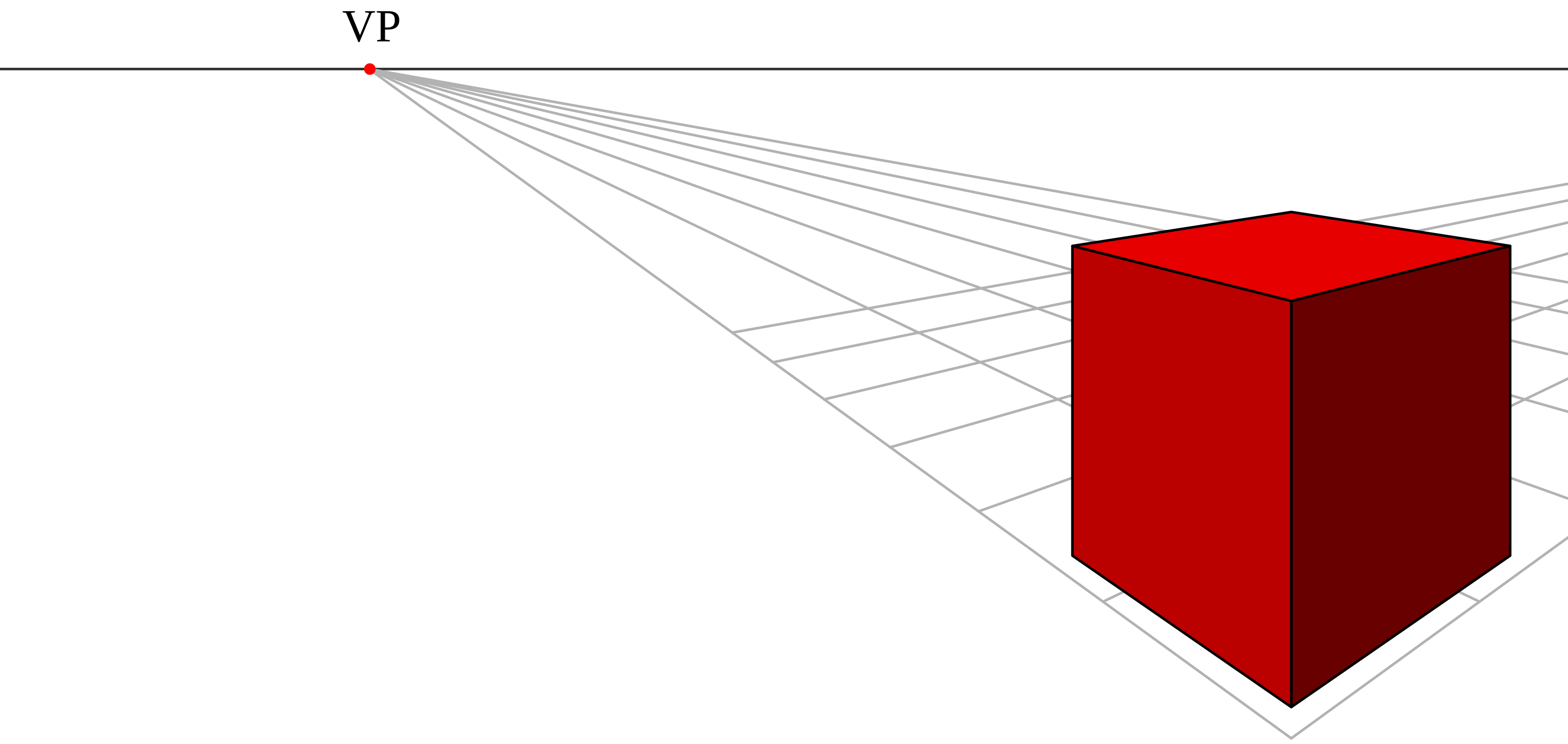
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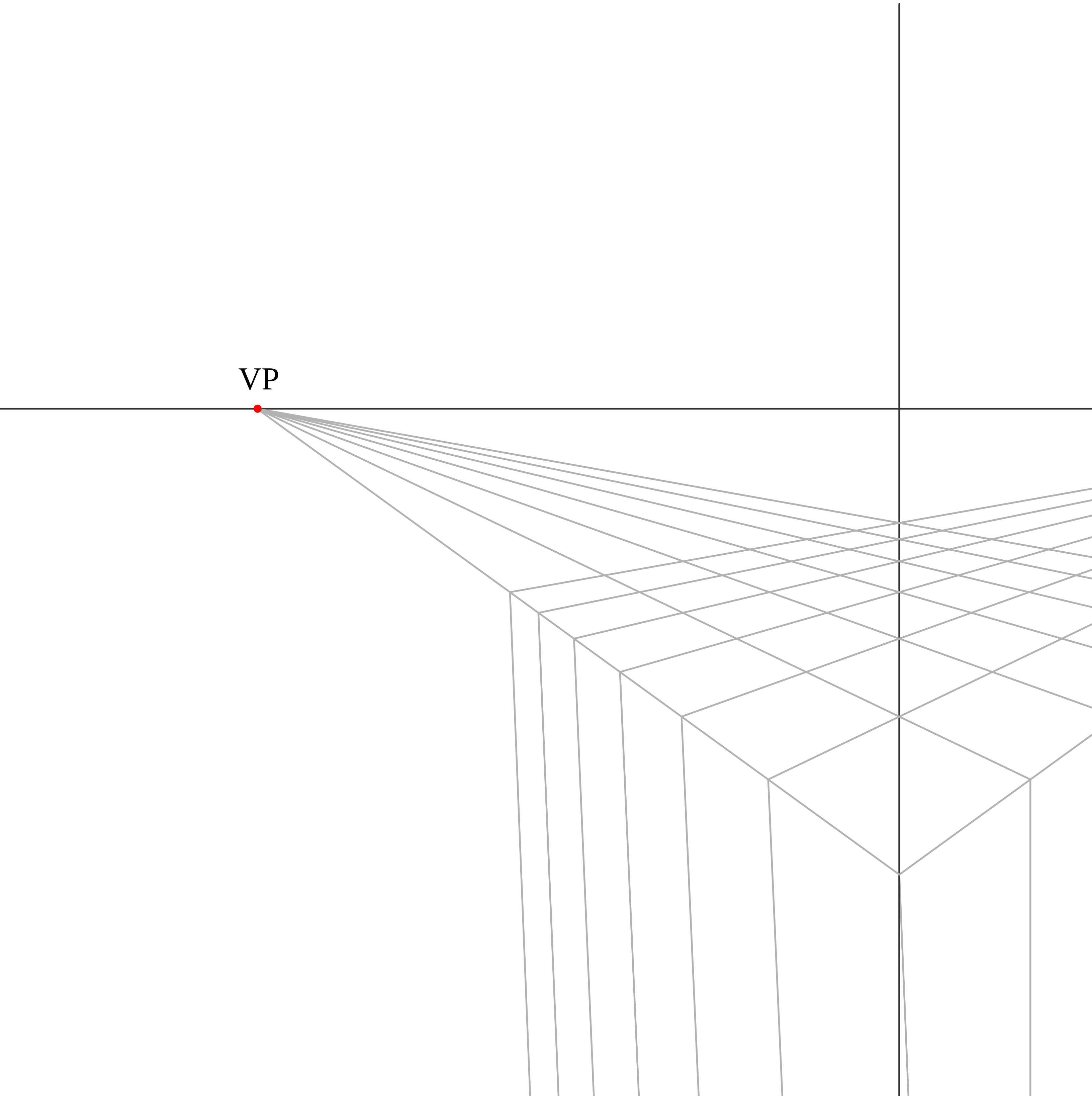
Two-point perspective is a special case of three-point perspective w
infinity along a line perpendicular to the horizon line. This "vertical ho
at the mid-point of the two first vanishing points.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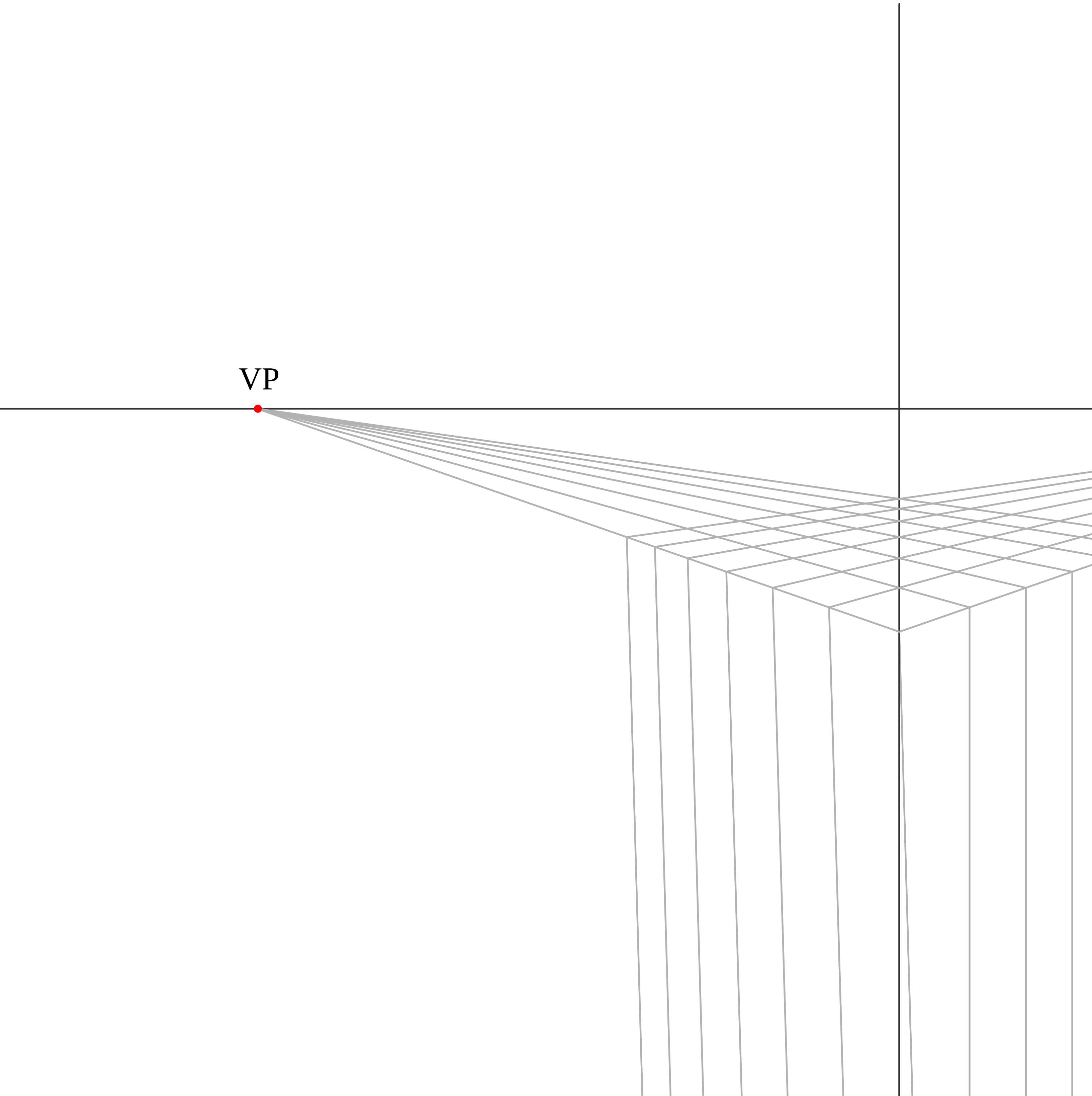
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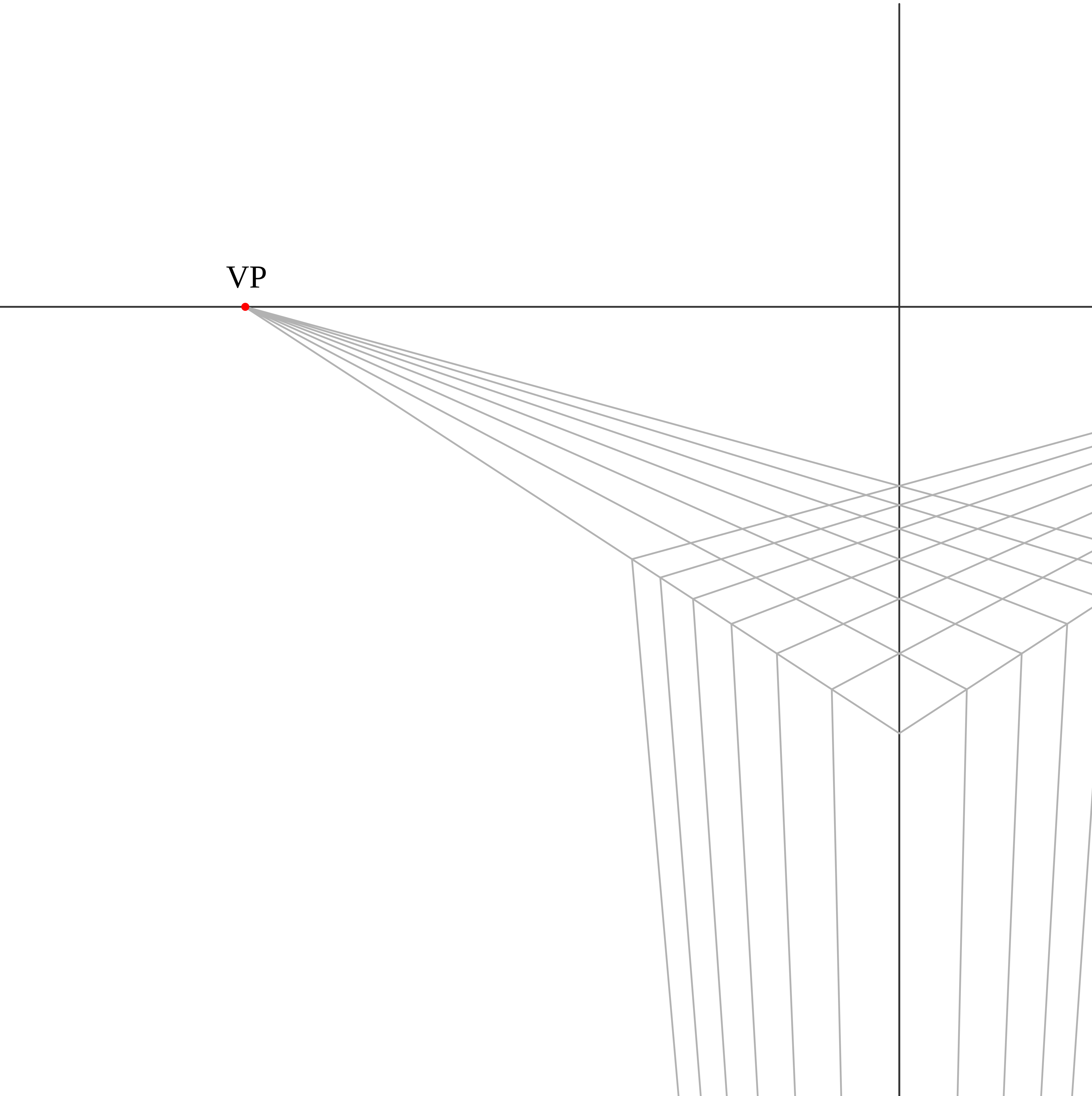
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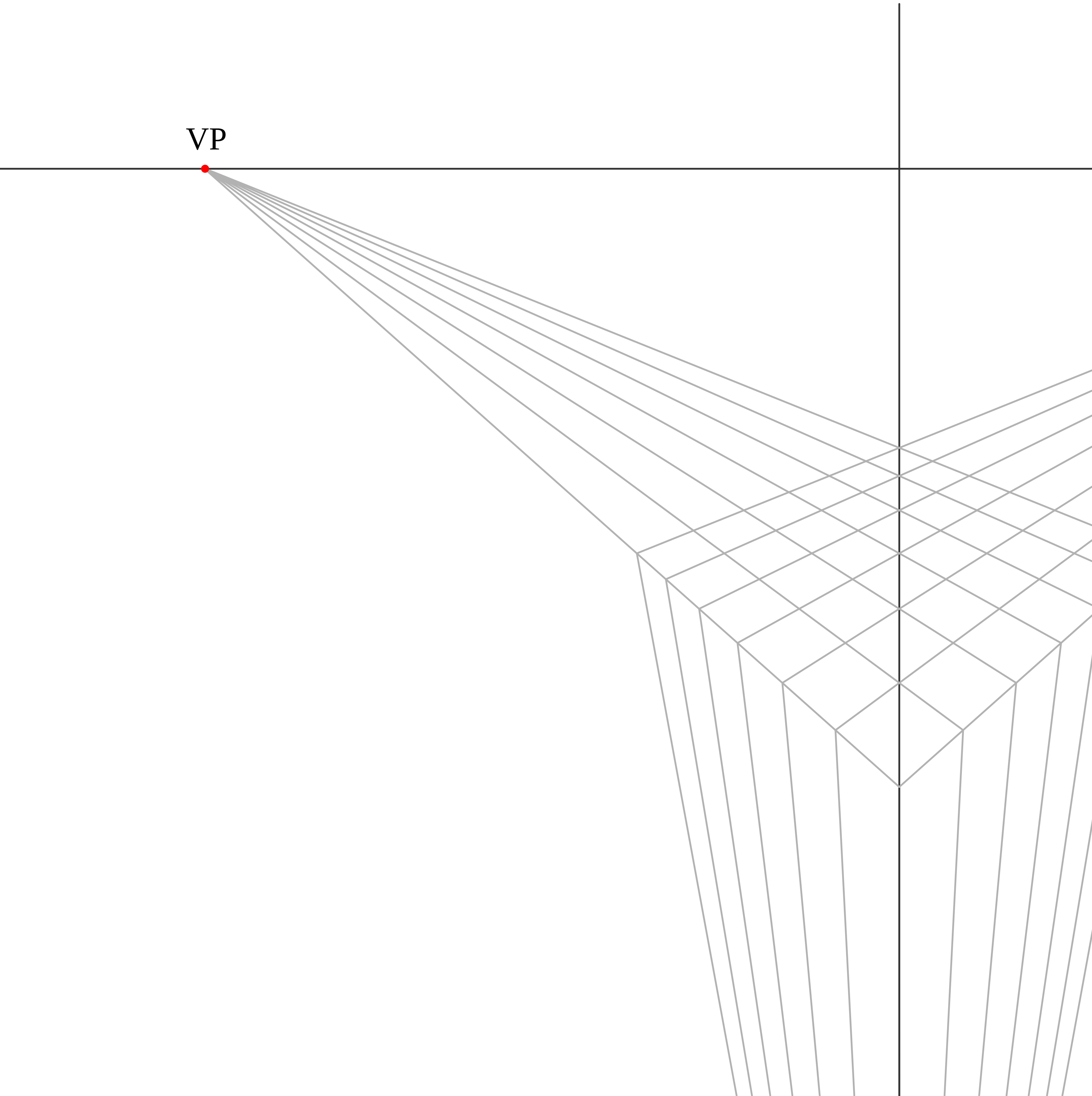
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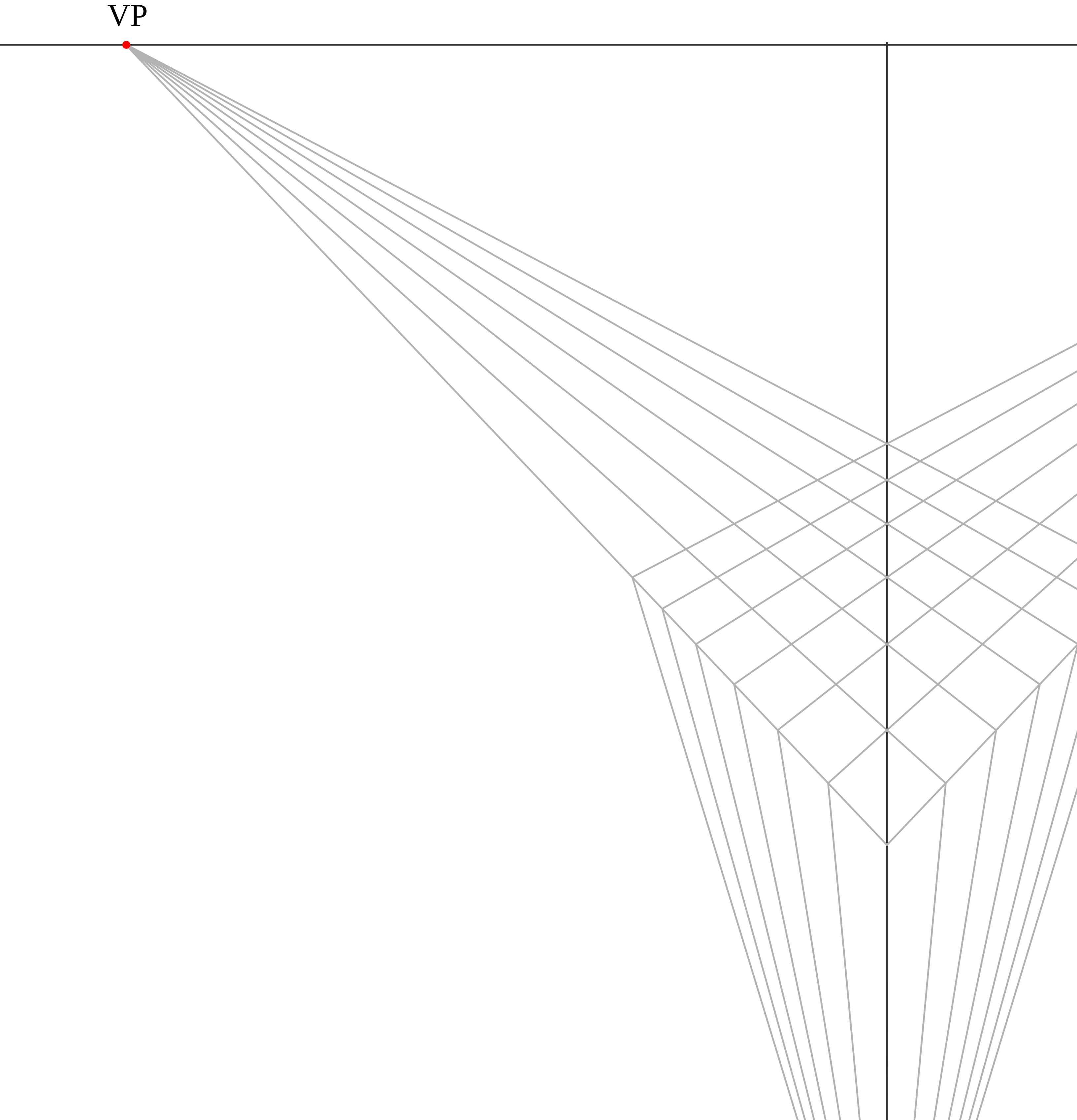
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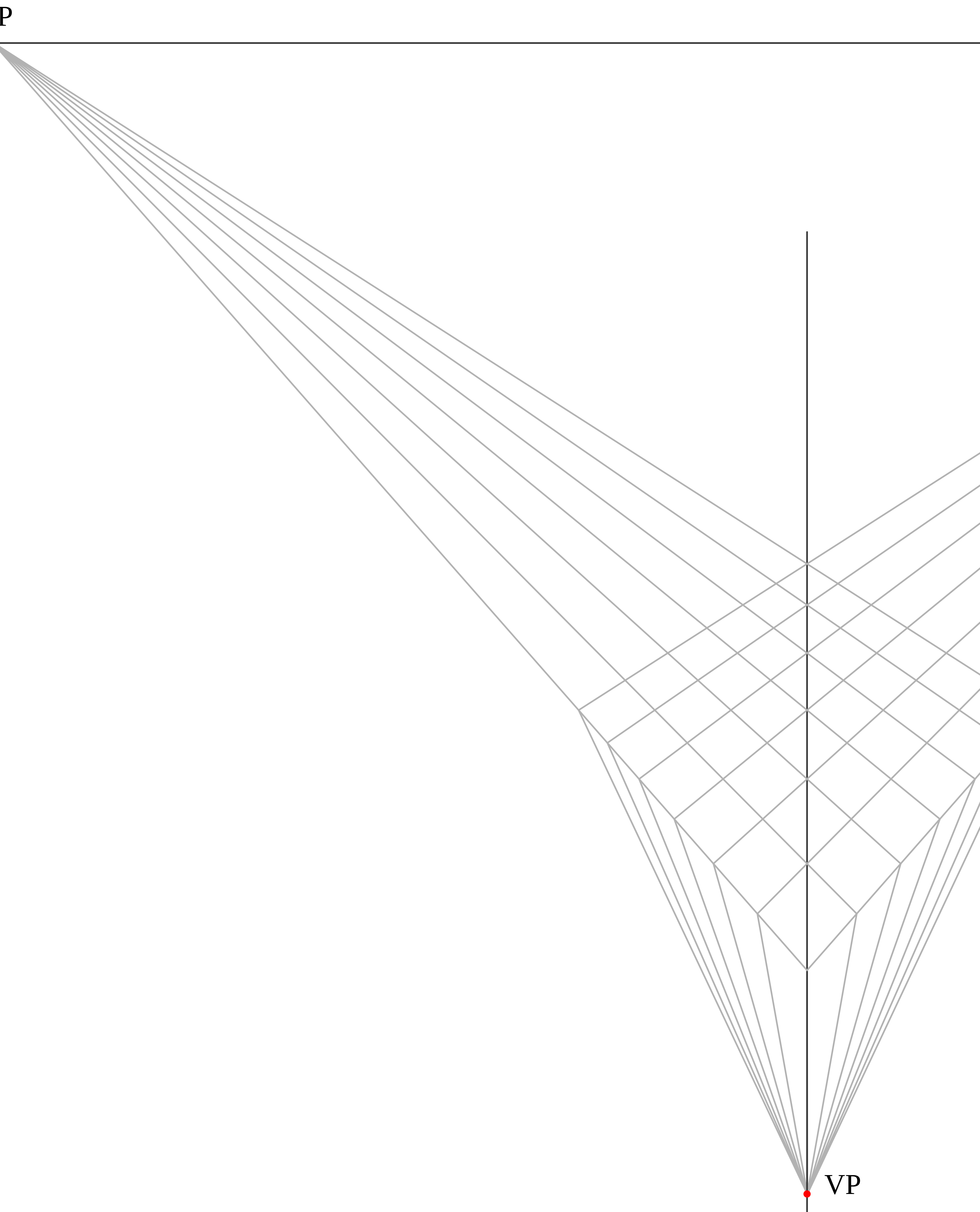
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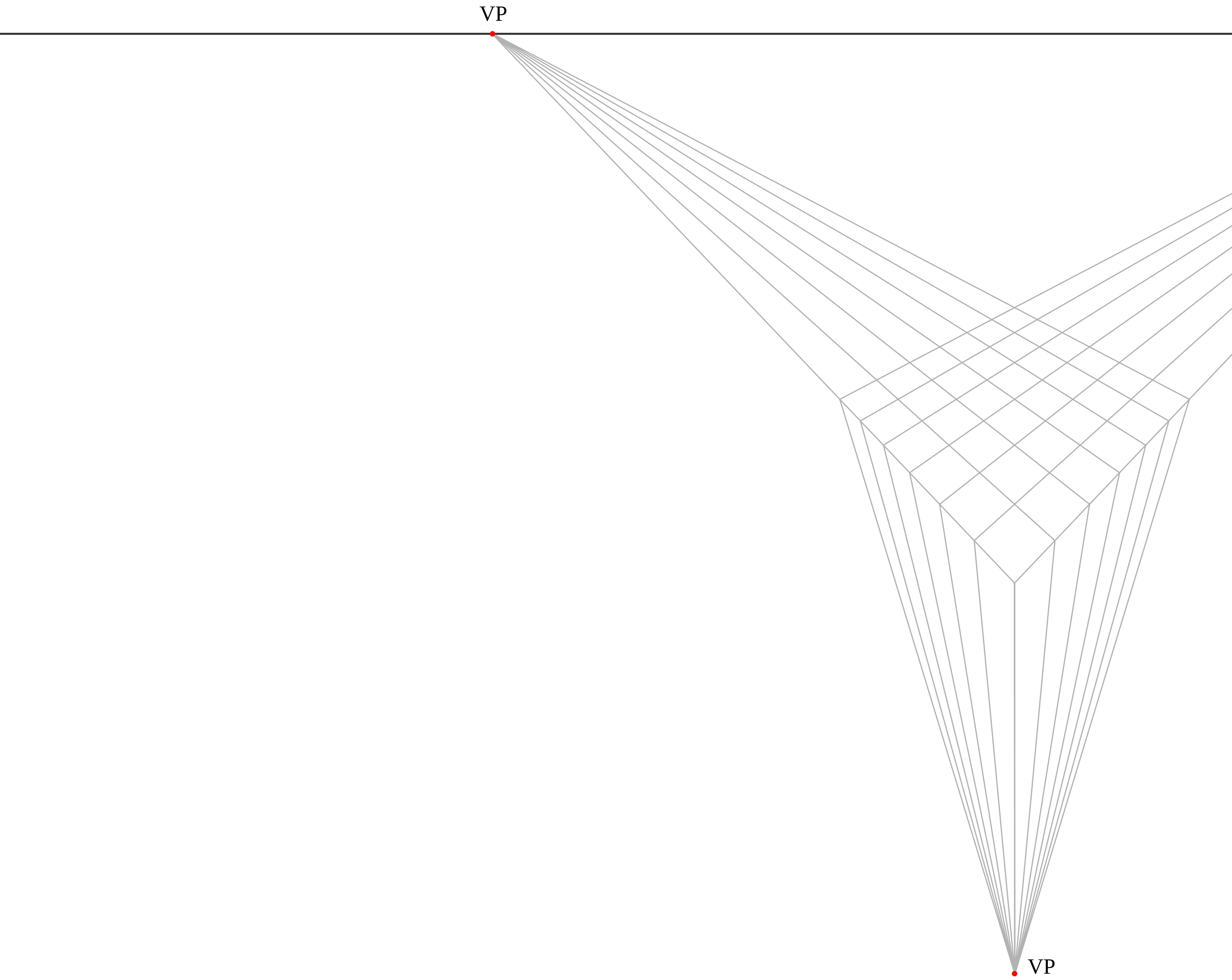
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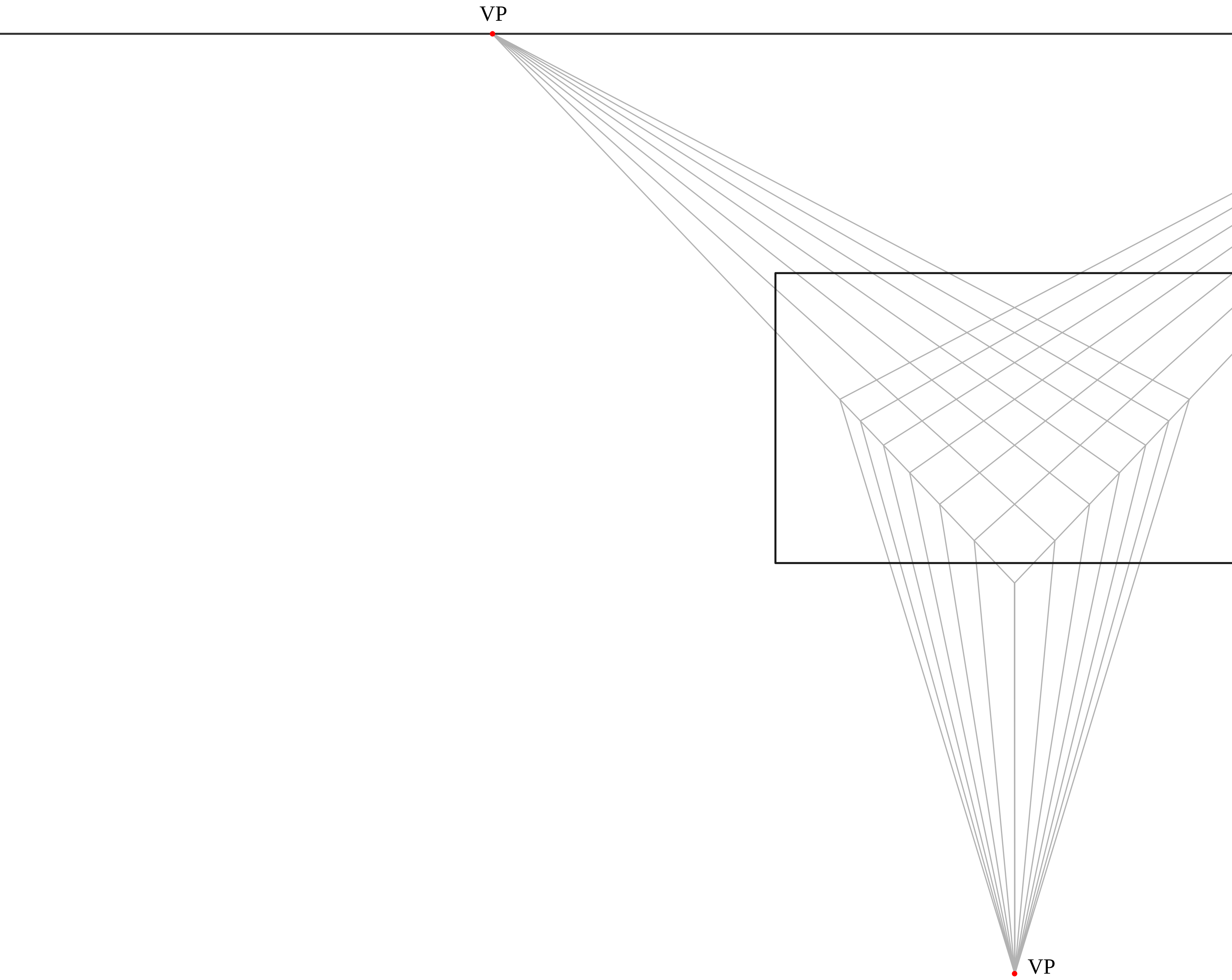
Three-point perspective:

All three axes now converge to vanishing points on the page. Usuall
perspective would place all the vanishing points off the page, on a la
so that the perspective does not seem unnatural.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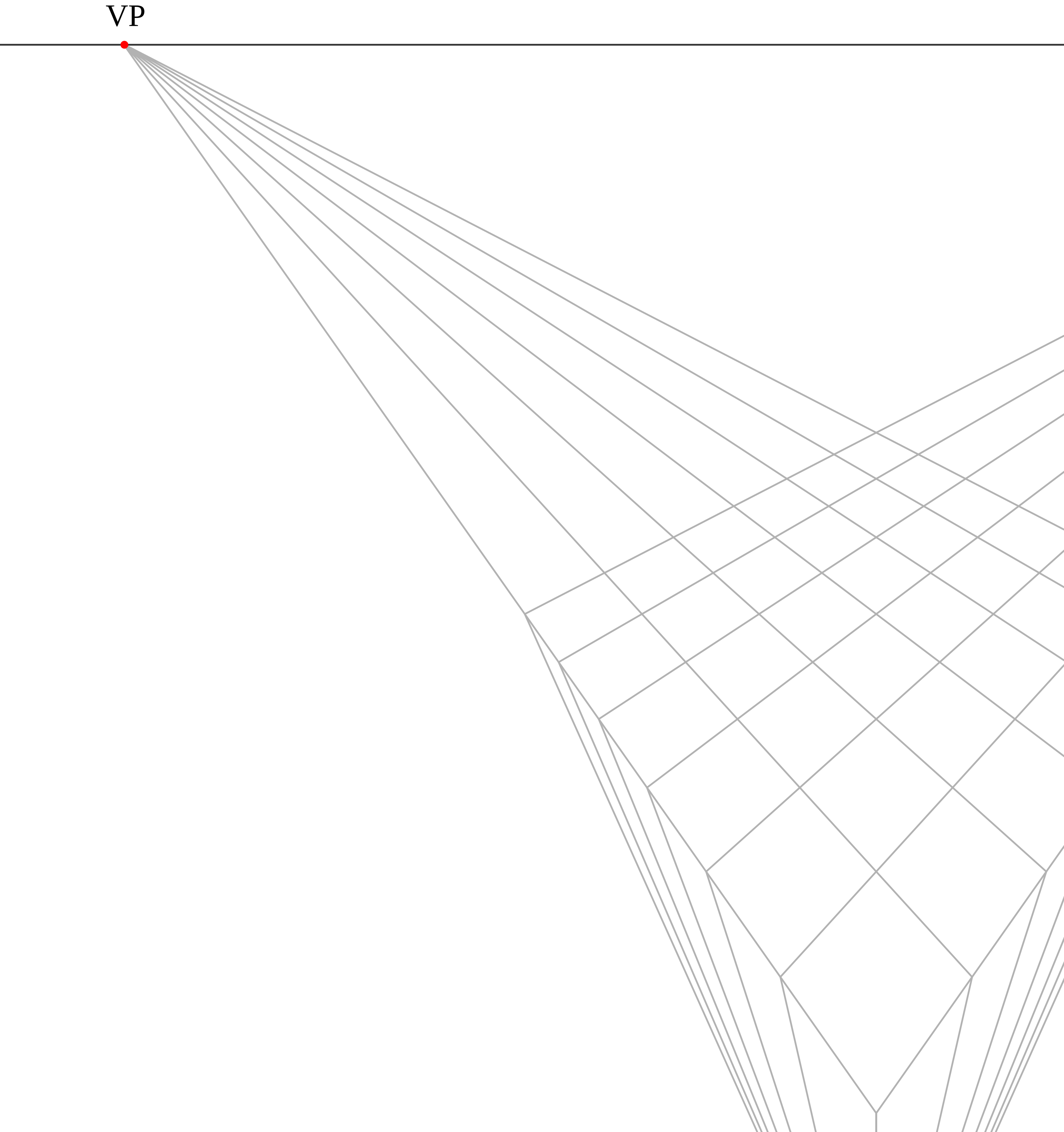
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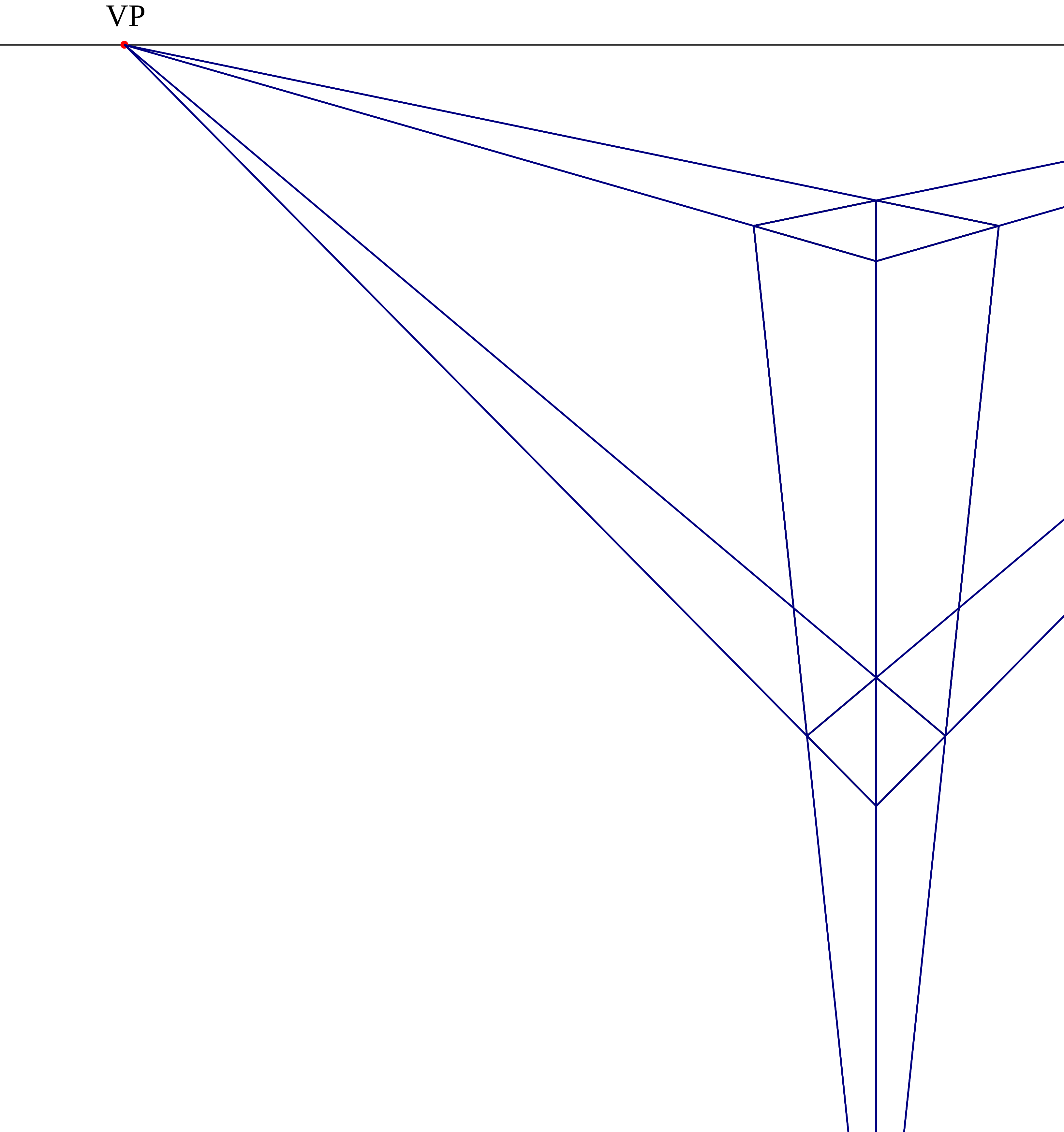
Drawing a Cube using three-point perspective:

There are no parallel lines or faces to the picture plane as there wer
time consuming to draw using three point-perspective, but it is partic
objects reletive to the viewer, either from a "birds-eye view" or a "mo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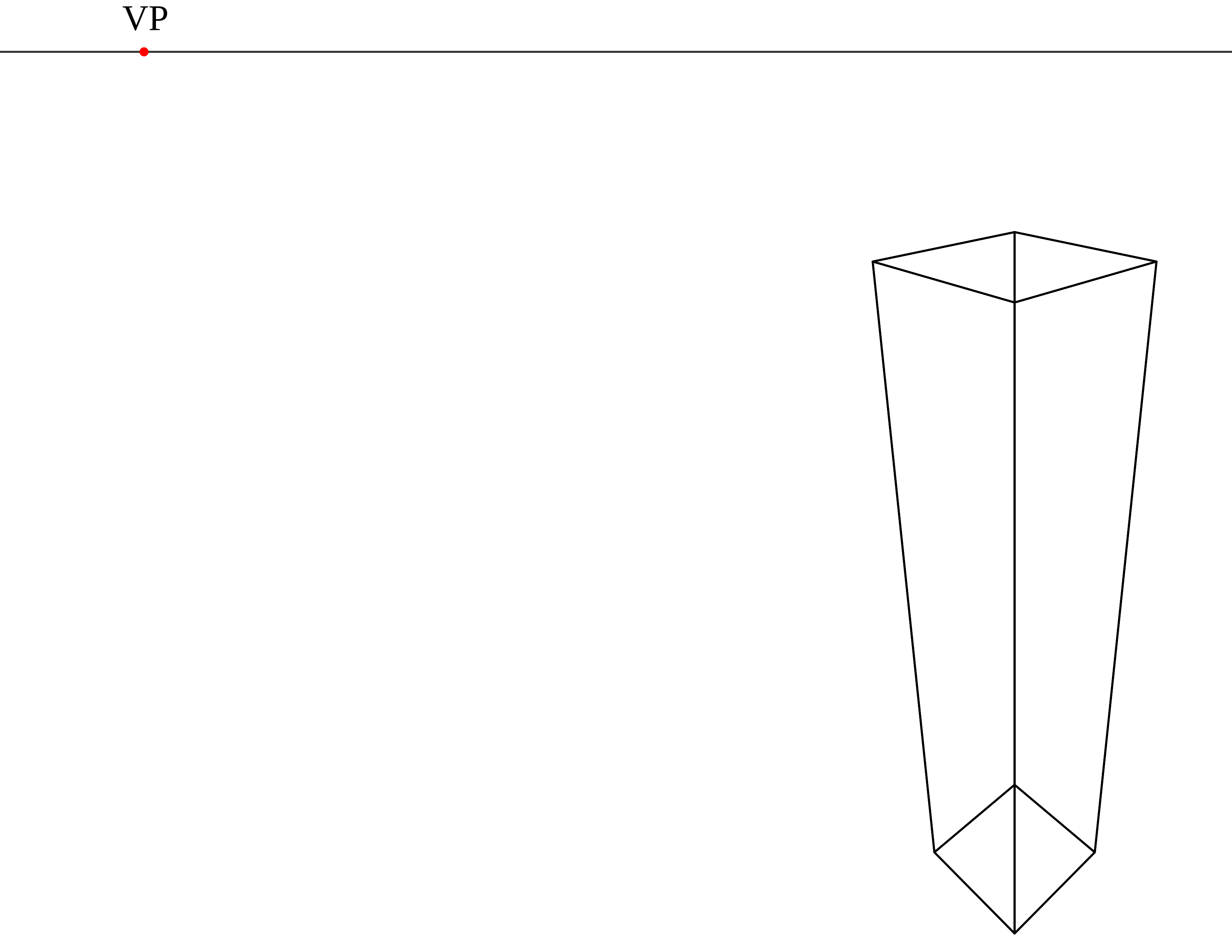
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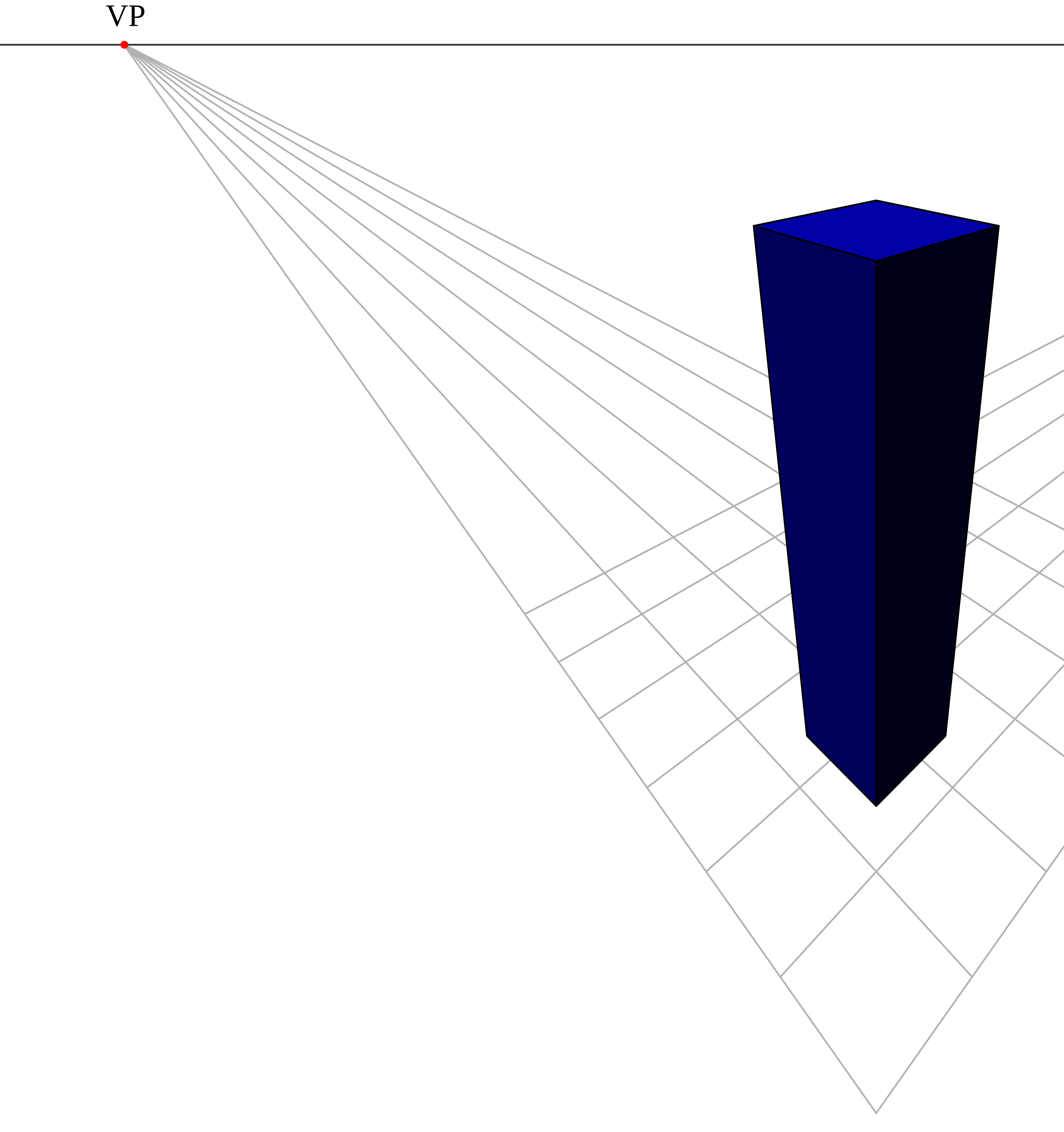
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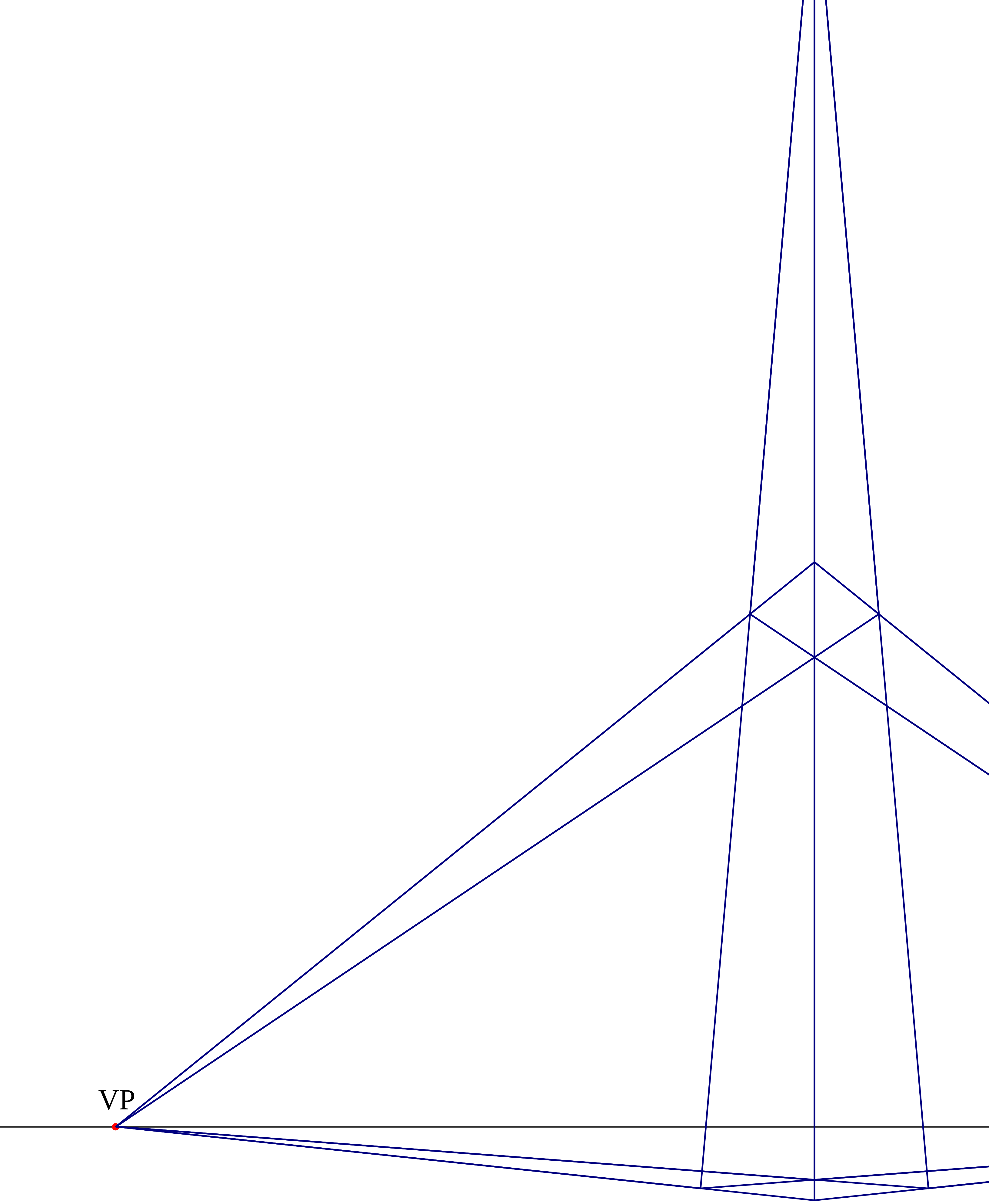
Here is the mouse’s view...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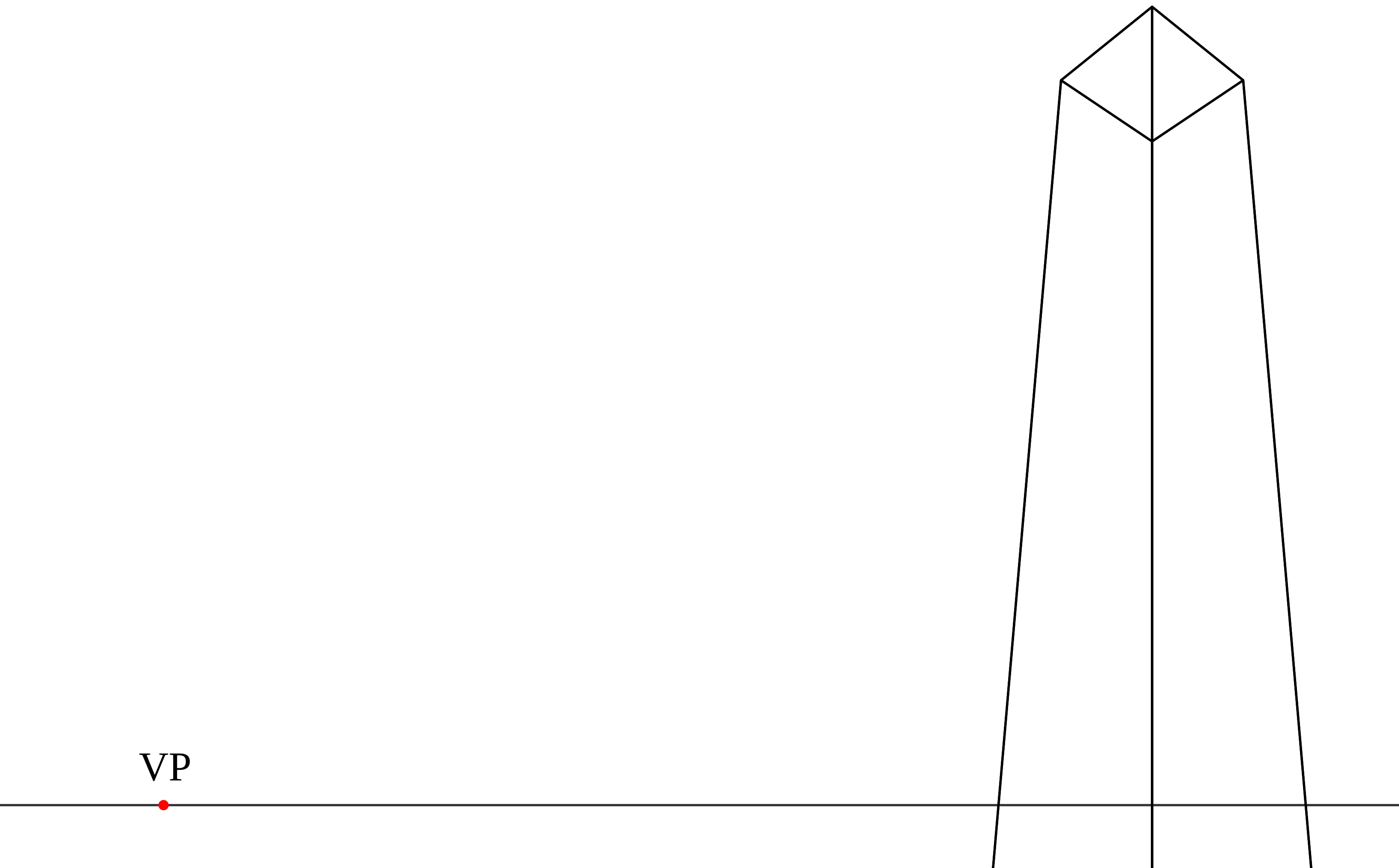
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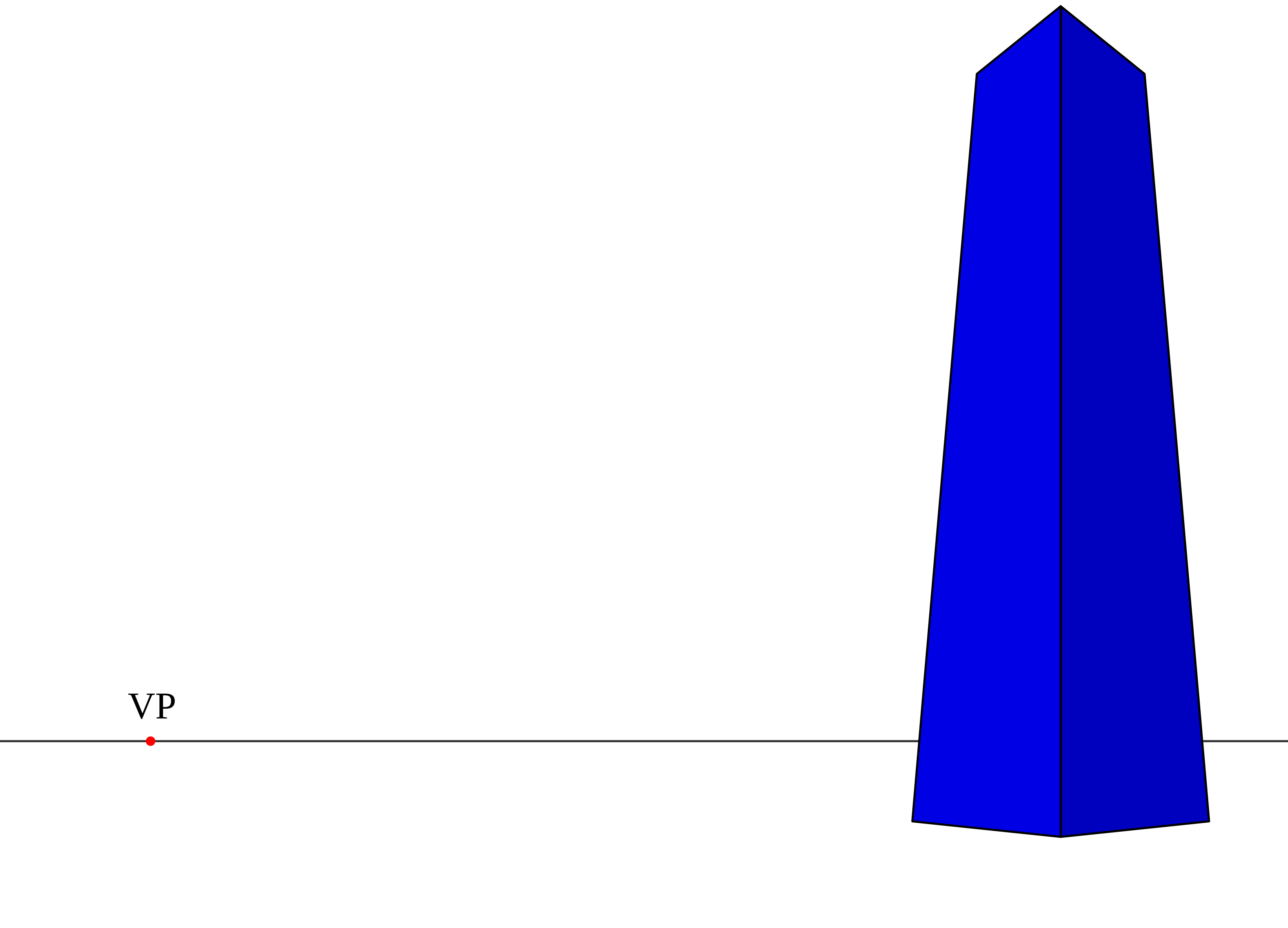
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THE END.