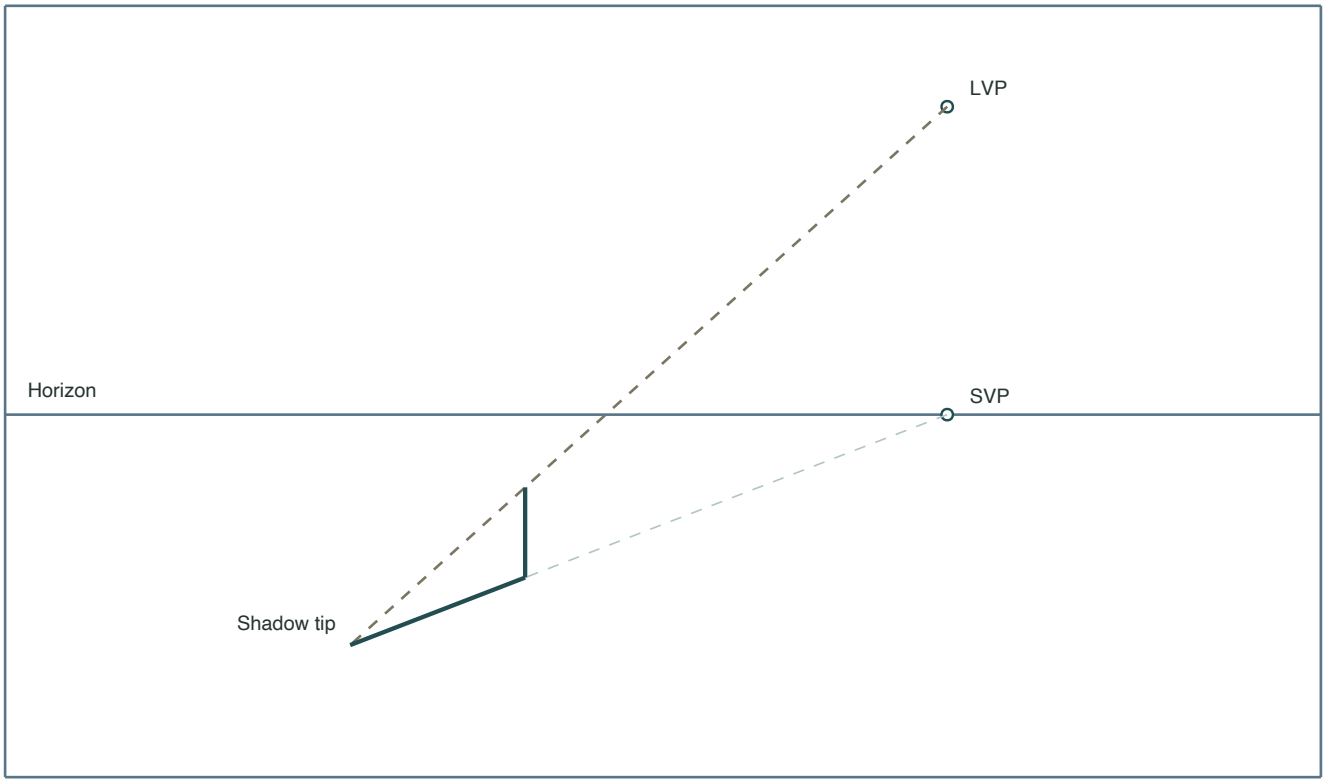
Draw Shadows in Perspective

Answer | Task 1 of 4 | A4

Original prompt

Given a horizon line, SVP, LVP, and one upright post in perspective, construct its cast shadow.



Answer

Extend the line from the base through SVP and the line from the top through LVP. Mark their intersection on the ground as the shadow tip. Draw the shadow as the segment from base to tip.

Reasoning

The base-to-SVP line gives the shadow's ground direction and the top-to-LVP line gives the light-ray direction; their crossing is the shadow tip.

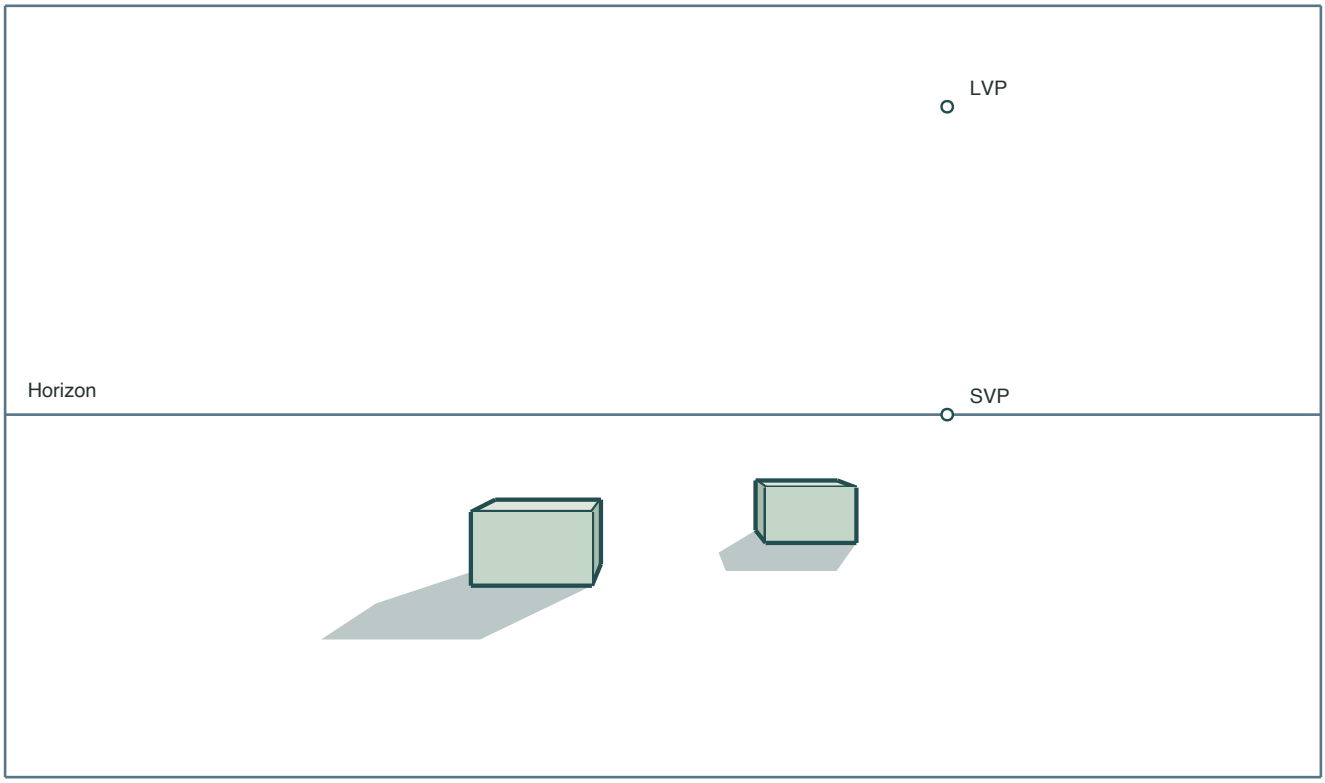
Check

The base-to-tip segment lies on the SVP line. The top-to-tip construction line extends through LVP.

Draw Shadows in Perspective

Original prompt

Given the same light setup and two boxes at different distances, construct both shadows so they agree.



Answer

Use the same points for the equal-size sample boxes, projecting each base-to-tip and top-to-tip pair. Draw each outer ground outline. The nearer box's shadow appears longer on this plate.

Reasoning

A single light setup means every object shares the same two vanishing directions, so consistency is achieved by reusing SVP and LVP.

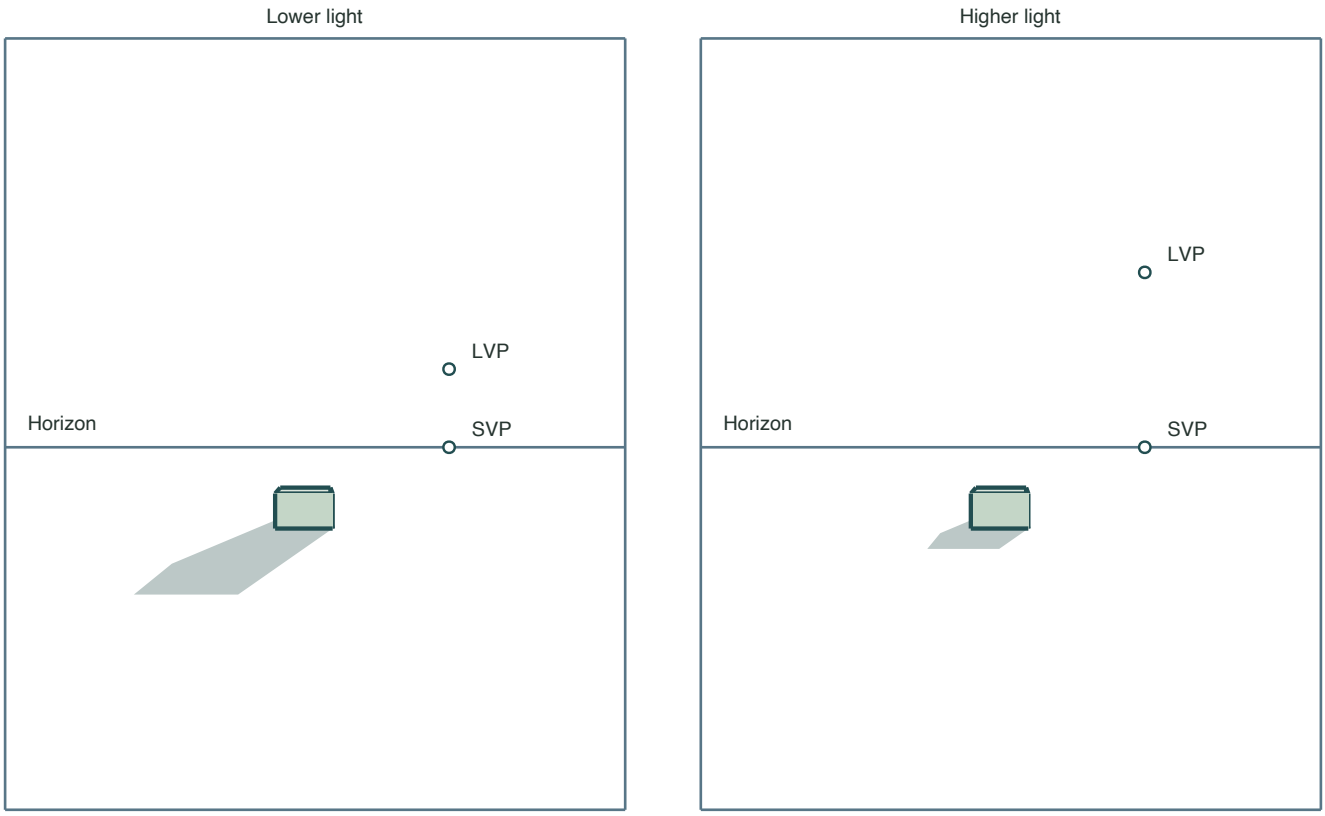
Check

The paired guides for both boxes use the same horizon SVP and elevated LVP. Their cast regions remain on the drawn ground plane.

Draw Shadows in Perspective

Original prompt

Given a light setup with LVP low and close to the horizon, construct a shadow for a simple block and describe how it differs from a high LVP.



Answer

For the same block, camera and ground direction, the lower LVP yields a longer ground shadow. Keep SVP fixed when constructing the shorter shadow under the higher LVP.

Reasoning

The LVP height controls how steeply light rays appear to fall, which changes how far the shadow reaches on the ground.

Check

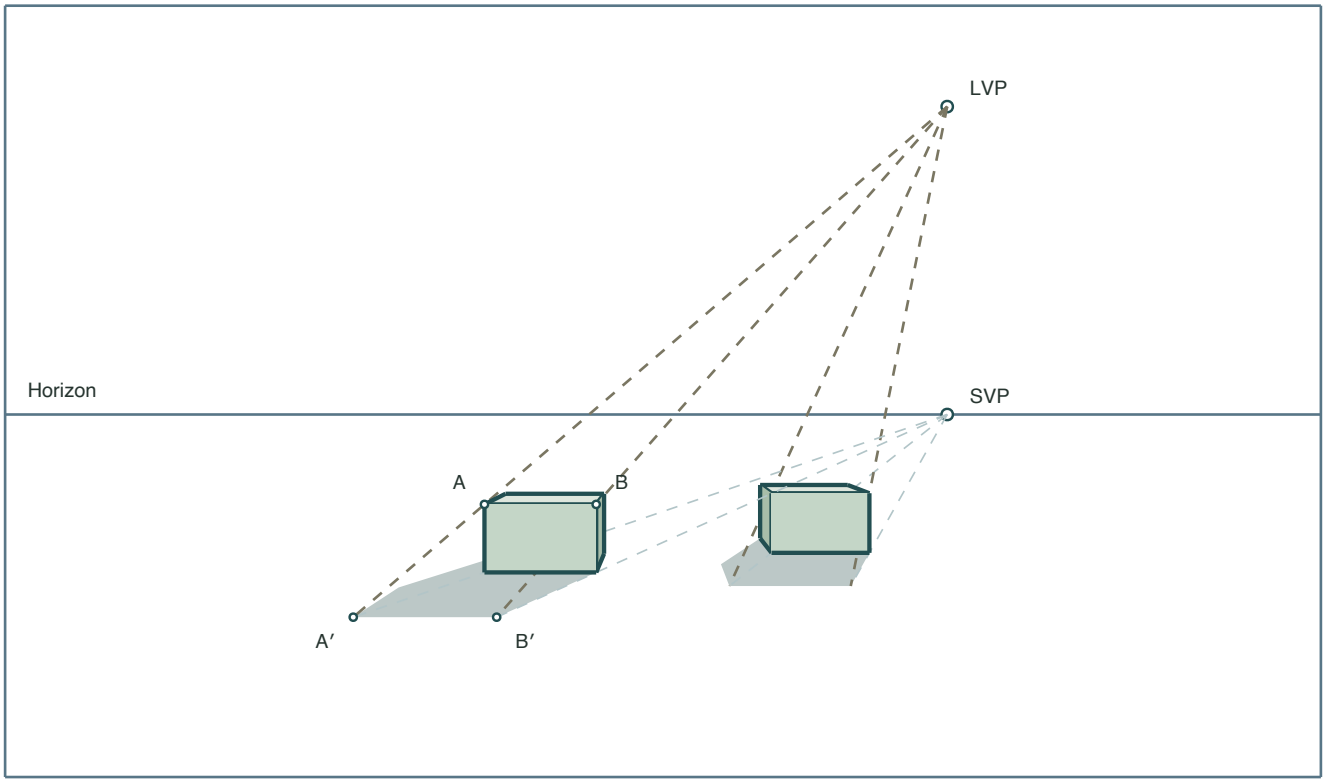
Check the two separate light guides against their own LVPs and use the same ground direction and box dimensions. Compare the distance from the same box corner to its shadow tip.

Draw Shadows in Perspective

Original prompt

Given a finished plate with one object and its shadow, find and mark the SVP and LVP used, then redraw a second object's shadow to match.

The marked pairs A with A′ and B with B′ show which top corners cast those tips.



Answer

Extend the lines through two roof corners and their marked ground tips to find LVP. Extend the lines from the base corners directly below those roof corners through the same tips to find SVP. Use the pair to project the second box.

Reasoning

Two corresponding roof-to-tip guides recover the directional light, and the two base-to-tip guides recover its ground direction. The labelled pairs identify the tips used in the construction.

Check

For the new box check two base-to-tip and top-to-tip pairs against the recovered points. The projected tips and footprint determine its shaded boundary.