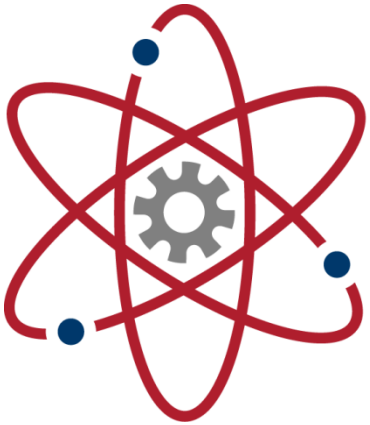


PROJECT LEAD THE WAY

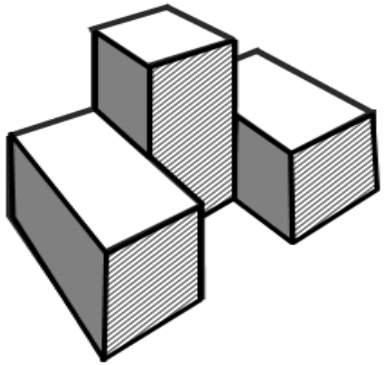
PLTW

Perspective Sketching

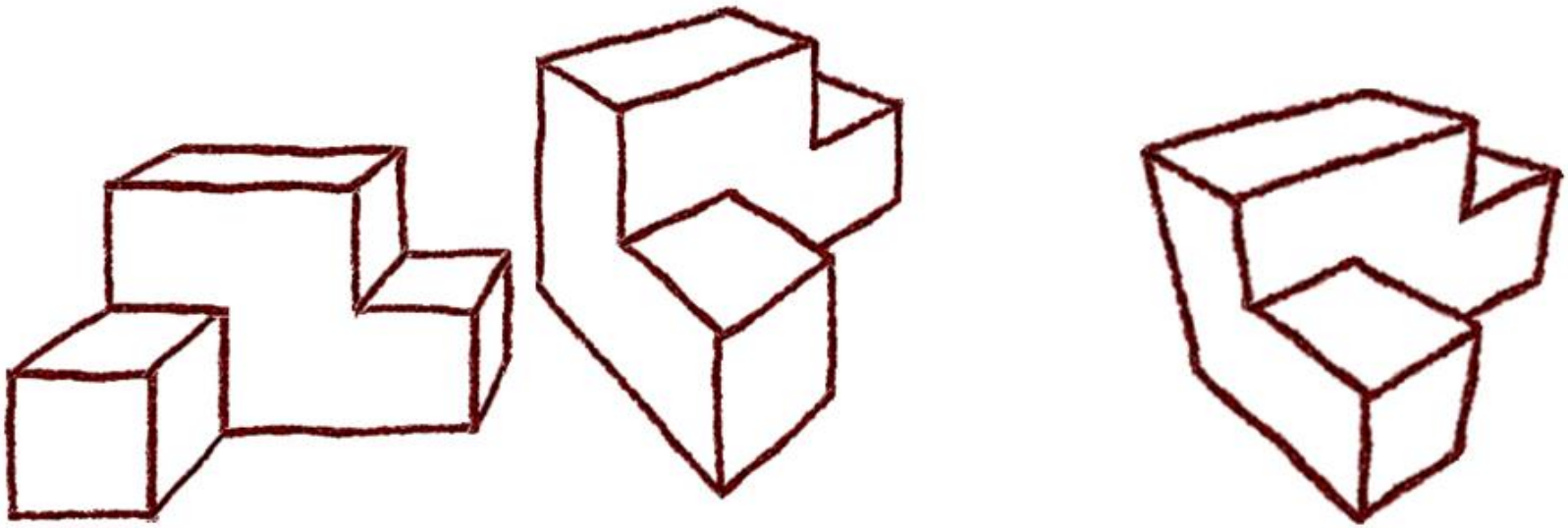
© 2012 Project Lead The Way, Inc.

Perspective Drawings

A perspective drawing offers the most realistic three-dimensional view of all the pictorial methods, because it portrays the object in a manner that is most similar to how the human eye perceives the visual world.



Perspective Drawings

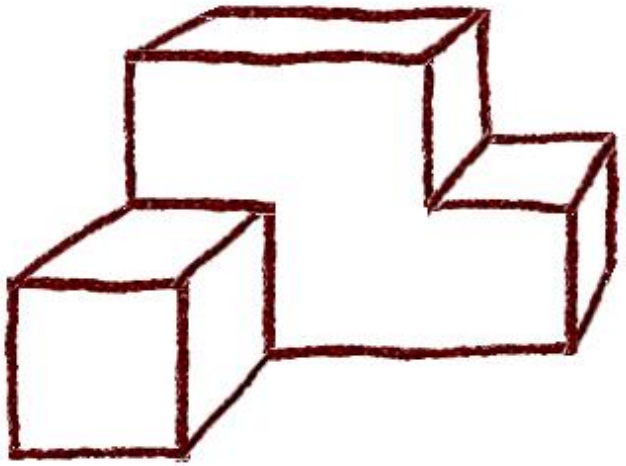


1-Point ***2-Point*** ***3-Point***

One-Point Perspective

The ***one-point*** perspective is relatively simple to make, but is somewhat awkward in appearance when compared to other types of pictorials.

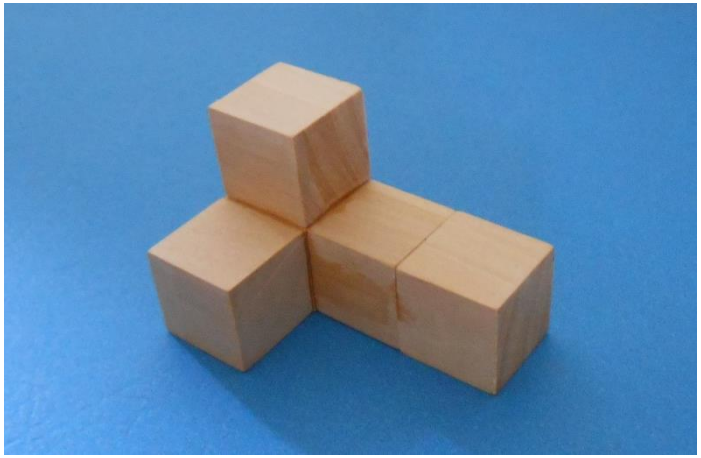
- A horizontal line represents the horizon.
- One vanishing point is identified on the horizon line.
- A series of lines are drawn from distinctive points on the object to the vanishing point, outlining the object being constructed.



One-Point Perspective

The following slides show the steps in creating a one-point perspective of the puzzle piece shown below.

Two different methods will be demonstrated.



One-Point Perspective

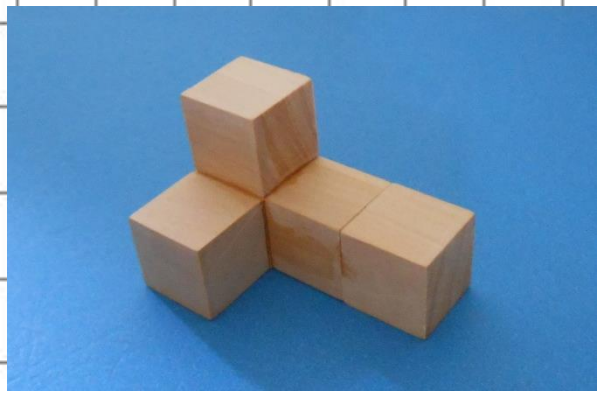
Horizon Line

V.P.

METHOD 1—The Box Method

1. Sketch a horizontal line across the upper portion of the paper to represent the horizon, and identify a vanishing point.

The vanishing point can be placed anywhere along the horizon line.



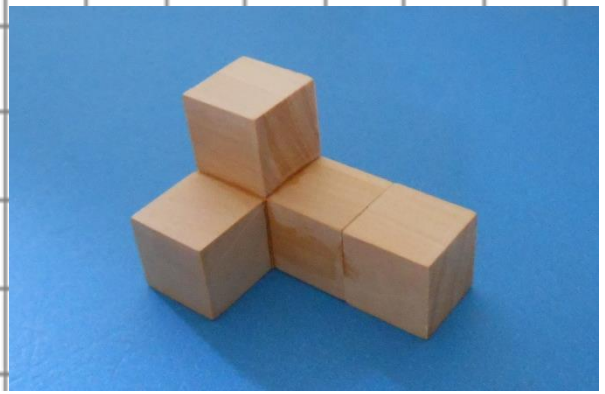
One-Point Perspective

Horizon Line

V.P.

2. Sketch the front face of a box representing the overall size of the object.

The front face is constructed with vertical height lines and horizontal width lines.

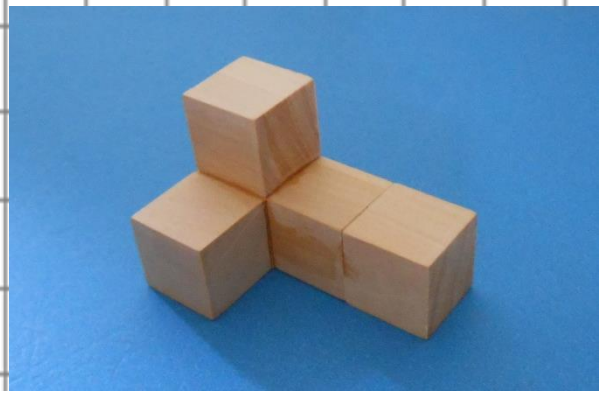


One-Point Perspective

Horizon Line

V.P.

3. Sketch construction lines from the corners of the front face of the box back to the vanishing point.

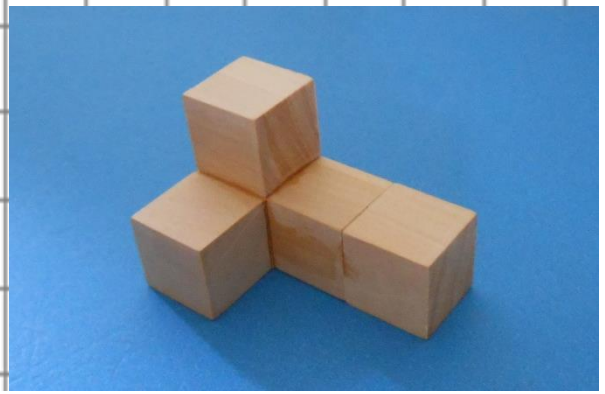


One-Point Perspective

Horizon Line

V.P.

4. Sketch the visible back edges of the box to represent the overall size of the object.



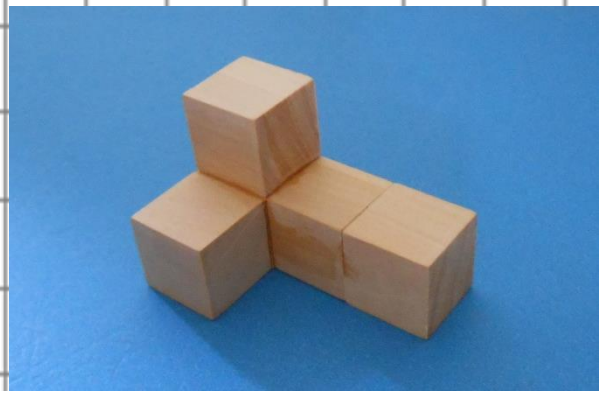
Note that you will have to estimate the depth of the object.

One-Point Perspective

Horizon Line

V.P.

5. Locate points and construction lines to identify corners and edges of the object on the surface of the box.

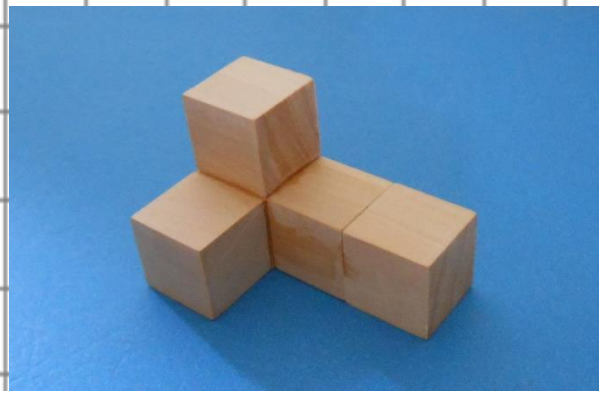


One-Point Perspective

Horizon Line

V.P.

6. Use object lines to trace over the edges of the object on the visible surface of the box.

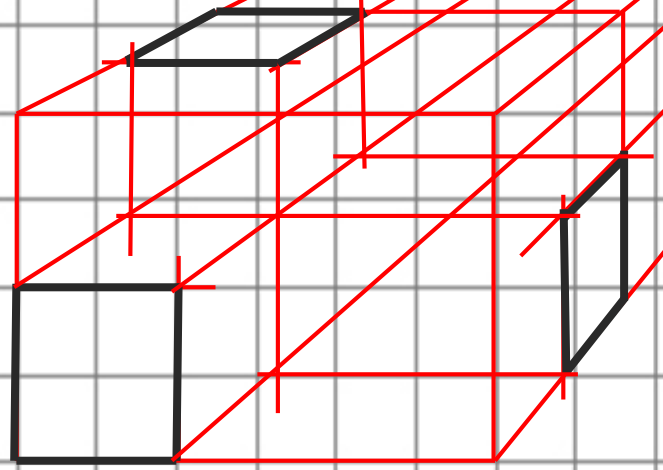


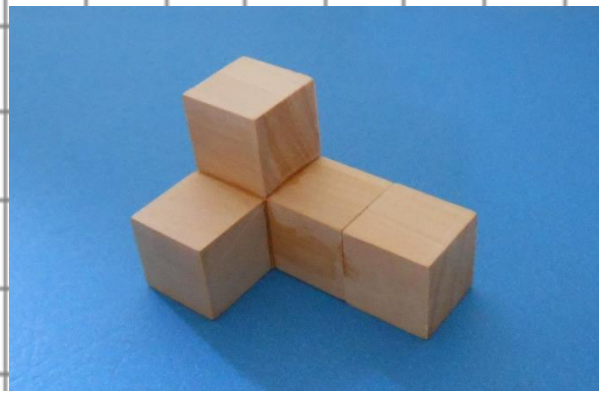
One-Point Perspective

Horizon Line

V.P.

7. Continue to use construction lines to delineate the remaining corners and edges of the object inside the box.



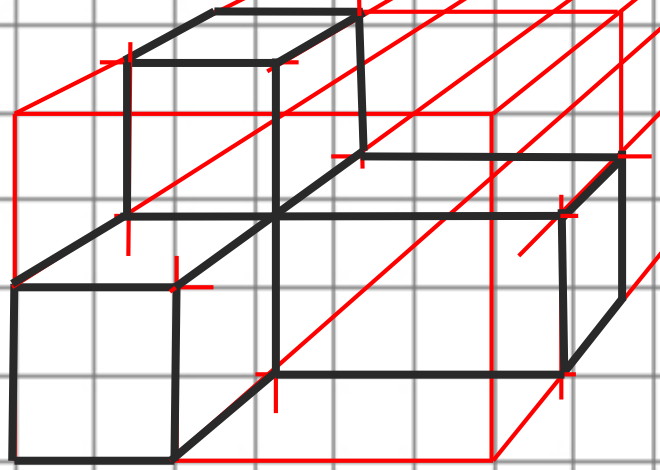


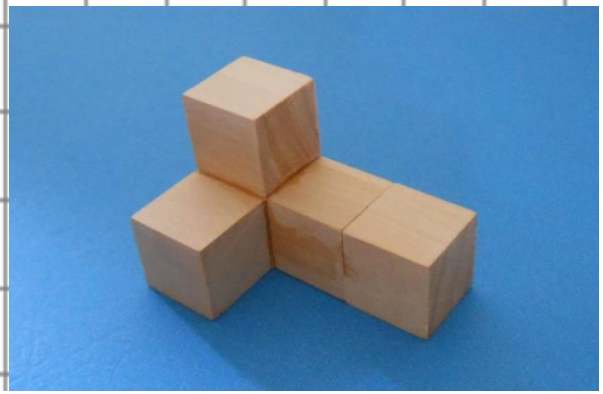
One-Point Perspective

Horizon Line

V.P.

8. Trace over the construction lines with object lines to define the object.





One-Point Perspective

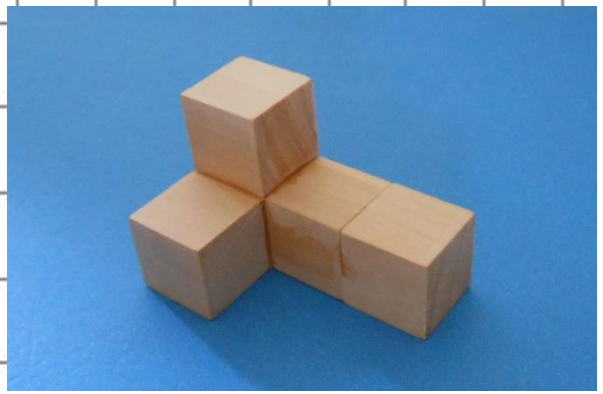
Horizon Line

V.P.

METHOD 2

1. Sketch a horizontal line across the upper portion of the paper to represent the horizon, and identify a vanishing point.

The vanishing point can be placed anywhere along the horizon line.

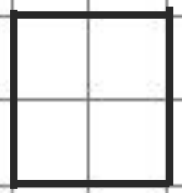


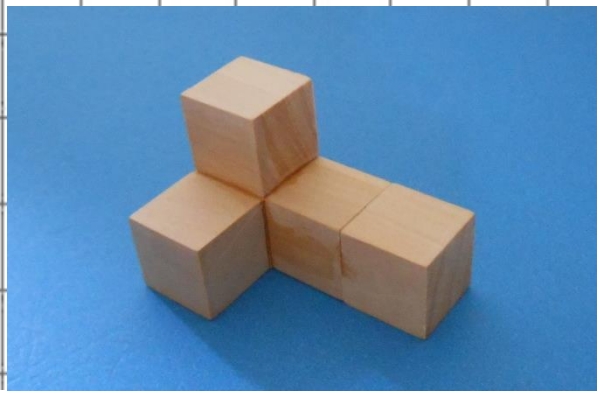
One-Point Perspective

Horizon Line

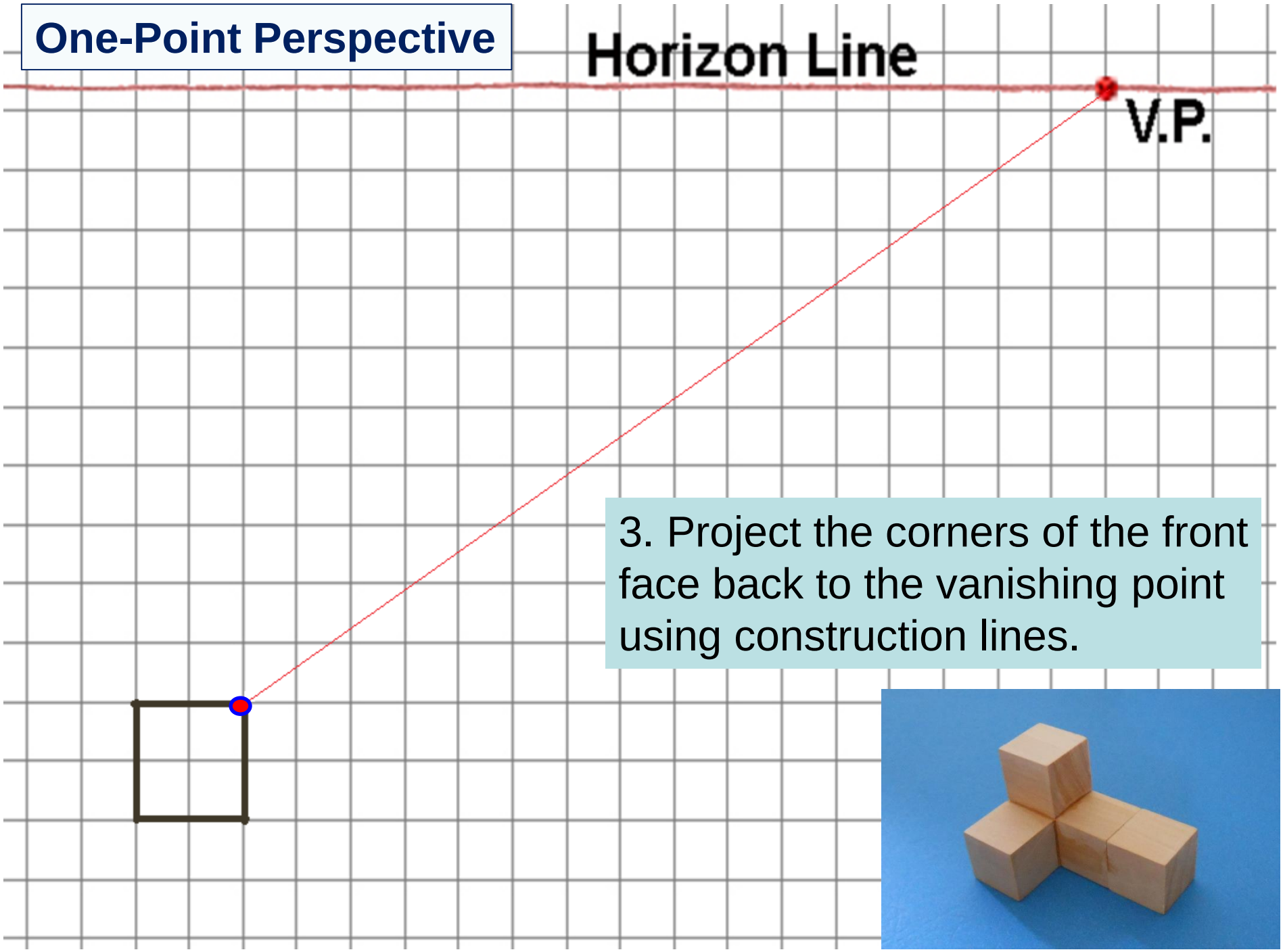
V.P.

2. Sketch the front most face of the object such that the height lines are vertical and the width lines are horizontal.



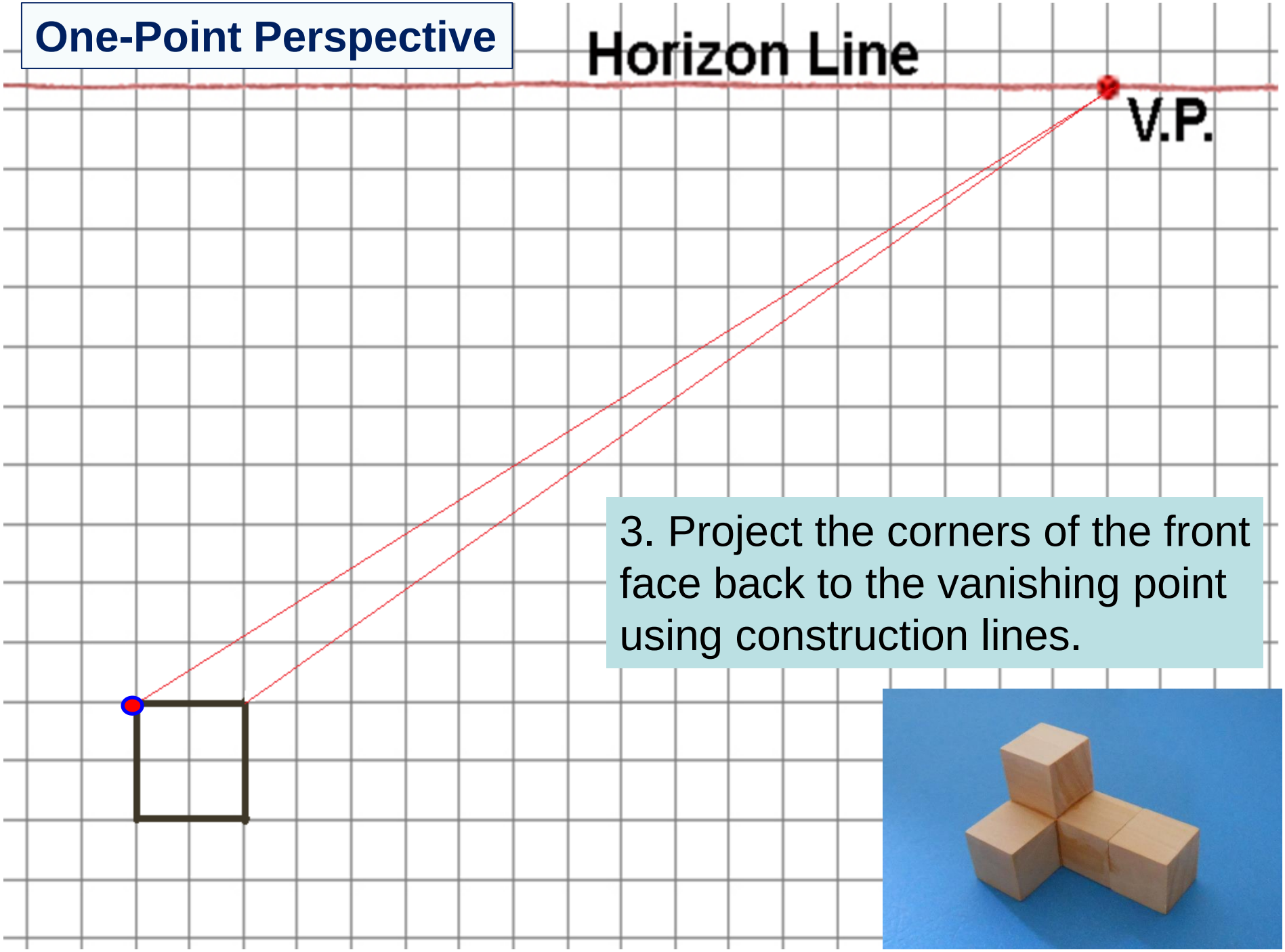


One-Point Perspective



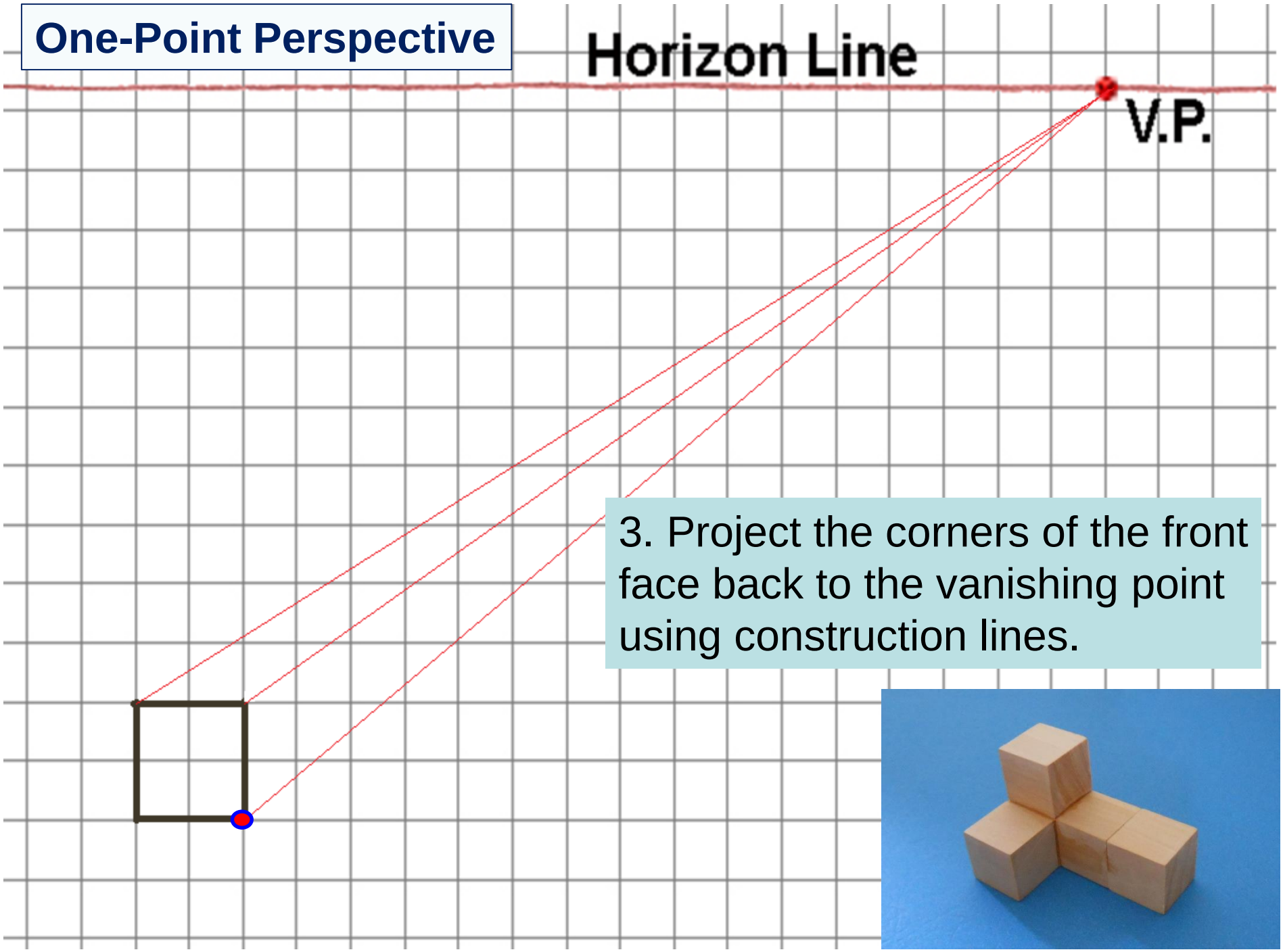
3. Project the corners of the front face back to the vanishing point using construction lines.

One-Point Perspective



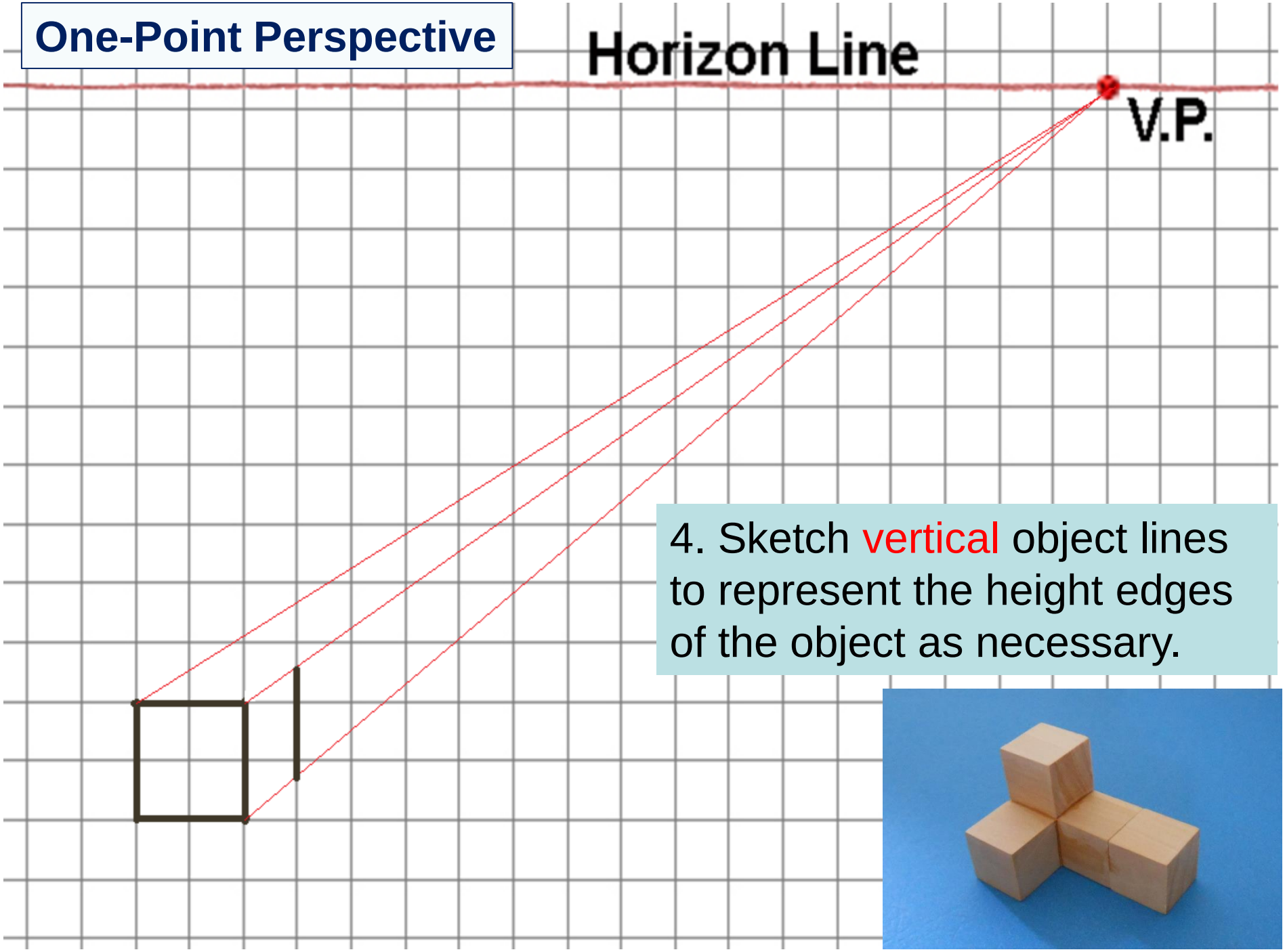
3. Project the corners of the front face back to the vanishing point using construction lines.

One-Point Perspective



3. Project the corners of the front face back to the vanishing point using construction lines.

One-Point Perspective



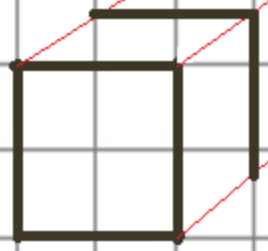
4. Sketch vertical object lines to represent the height edges of the object as necessary.

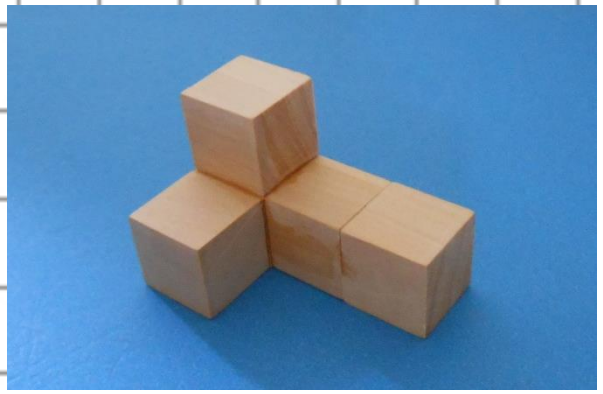
One-Point Perspective

Horizon Line

V.P.

5. Sketch horizontal object lines to represent the width edges of the object as necessary.



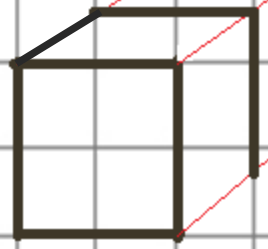


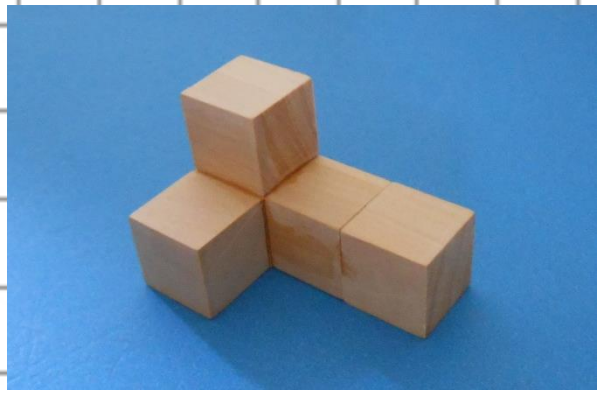
One-Point Perspective

Horizon Line

V.P.

6. Trace over the receding object lines to represent the depth edges of the object as necessary.



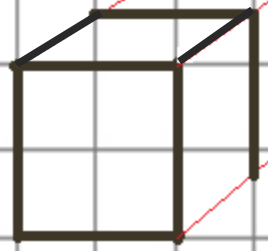


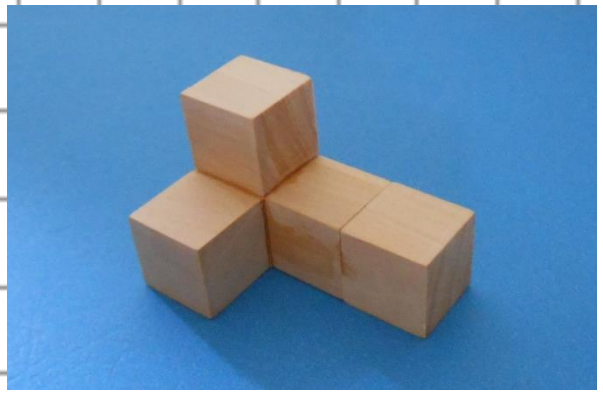
One-Point Perspective

Horizon Line

V.P.

6. Trace over the receding object lines to represent the depth edges of the object as necessary.



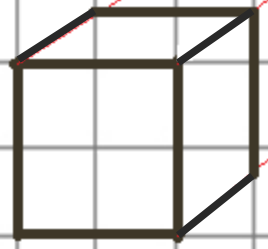


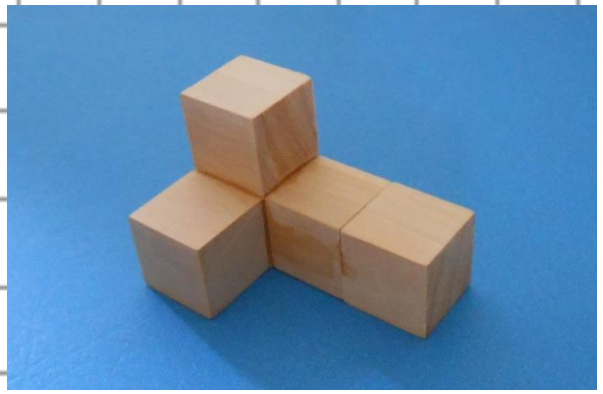
One-Point Perspective

Horizon Line

V.P.

6. Trace over the receding object lines to represent the depth edges of the object as necessary.



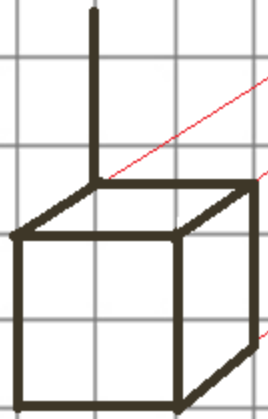


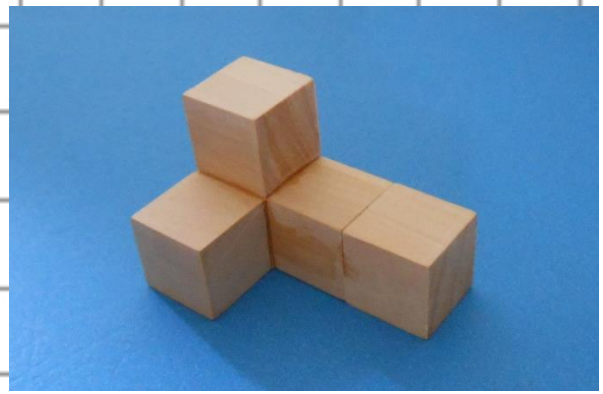
One-Point Perspective

Horizon Line

V.P.

7. Continue to sketch height and width object lines as vertical and horizontal lines as necessary to define parts of the object.



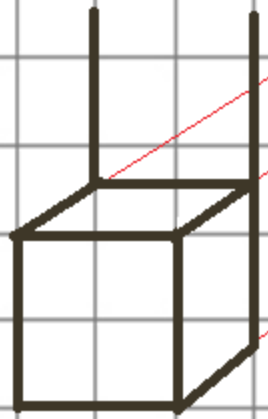


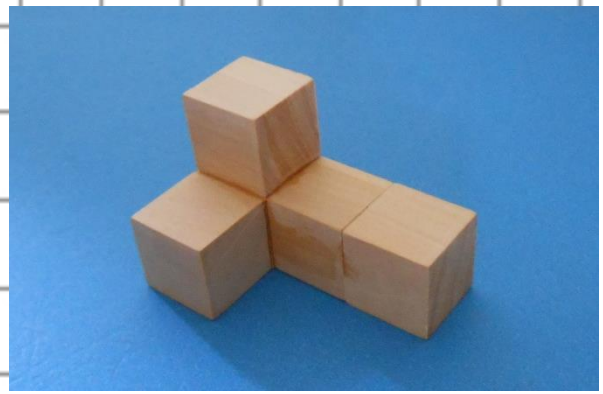
One-Point Perspective

Horizon Line

V.P.

7. Continue to sketch height and width object lines as vertical and horizontal lines as necessary to define parts of the object.



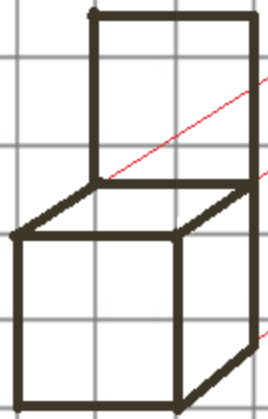


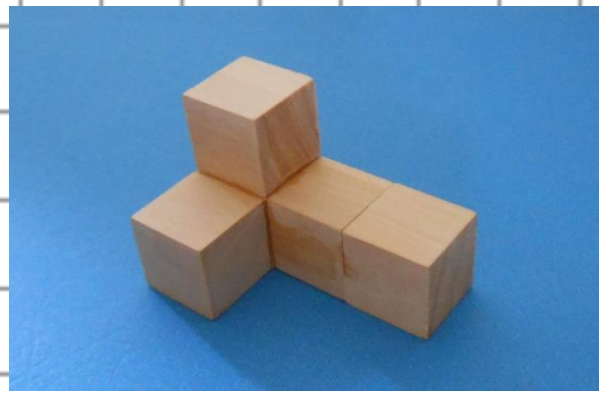
One-Point Perspective

Horizon Line

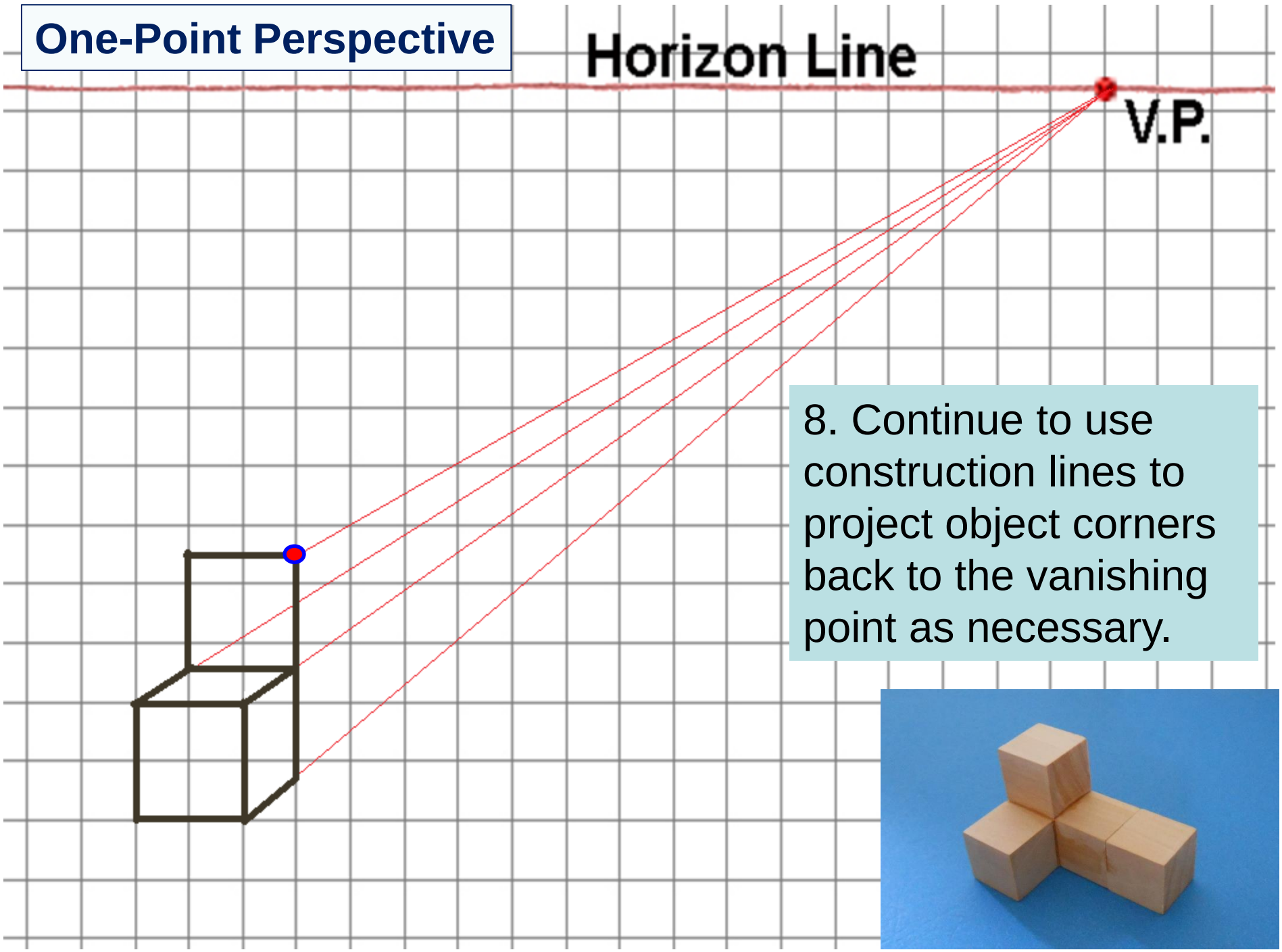
V.P.

7. Continue to sketch height and width object lines as vertical and horizontal lines as necessary to define parts of the object.



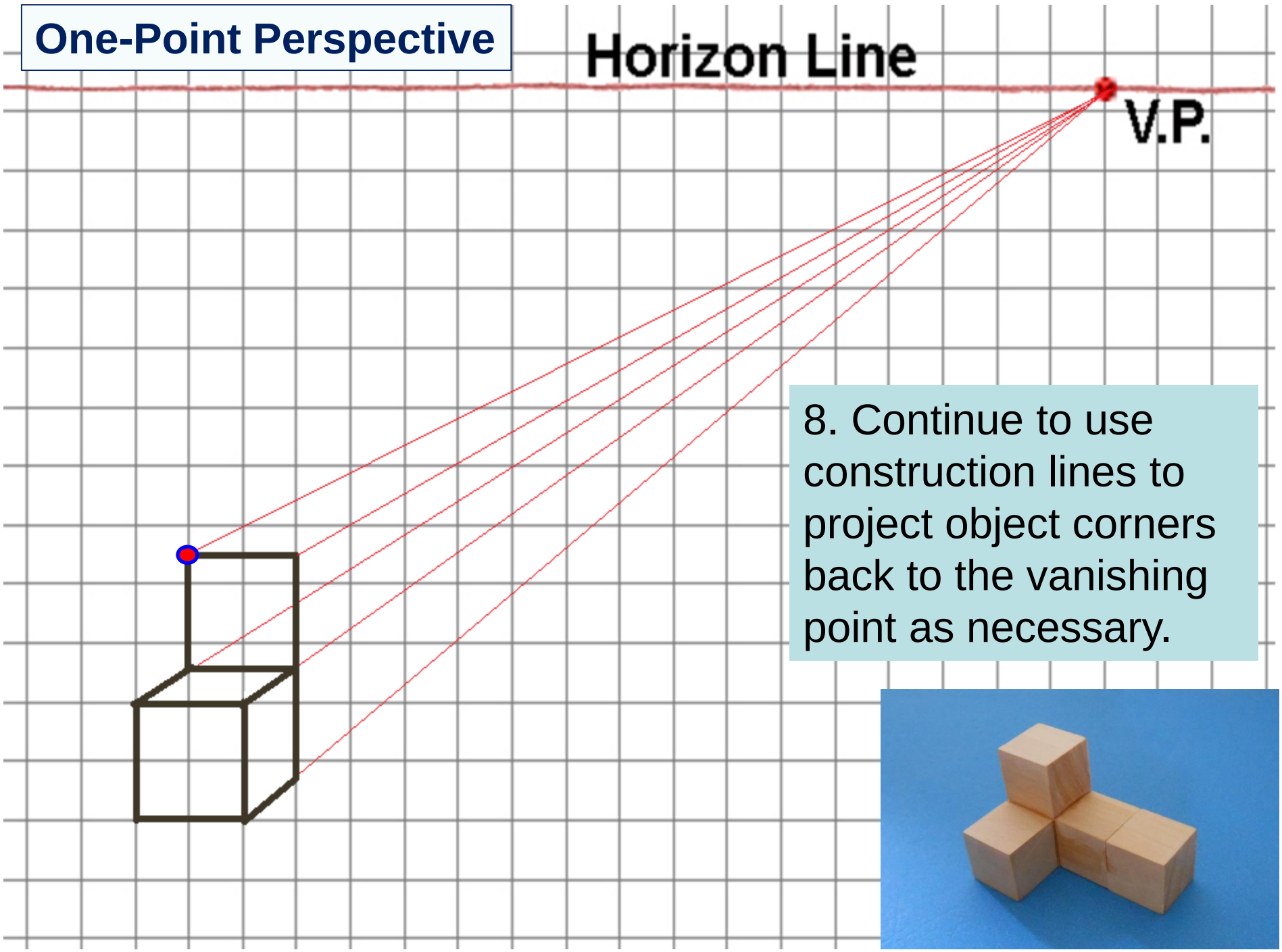


One-Point Perspective



8. Continue to use construction lines to project object corners back to the vanishing point as necessary.

One-Point Perspective

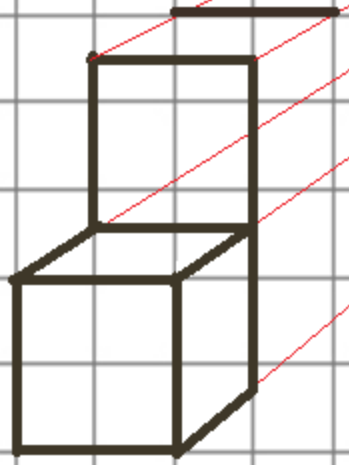


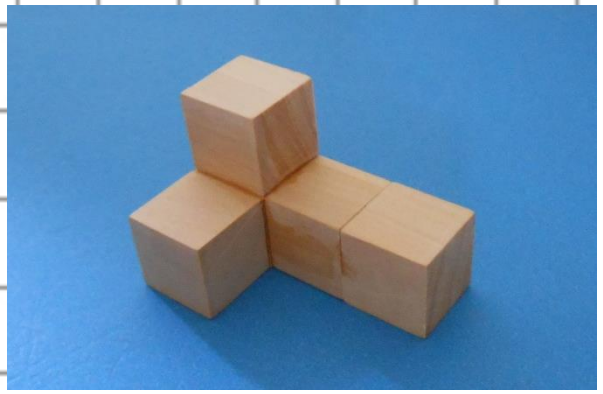
8. Continue to use construction lines to project object corners back to the vanishing point as necessary.

One-Point Perspective

Horizon Line

V.P.

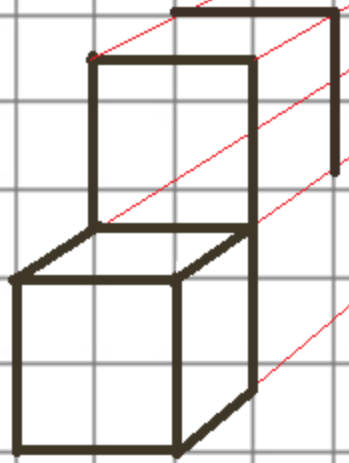


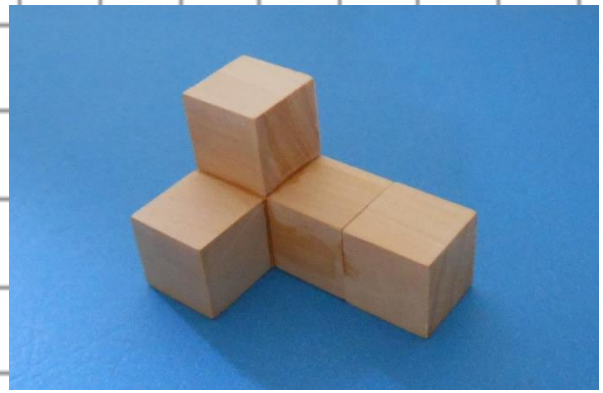


One-Point Perspective

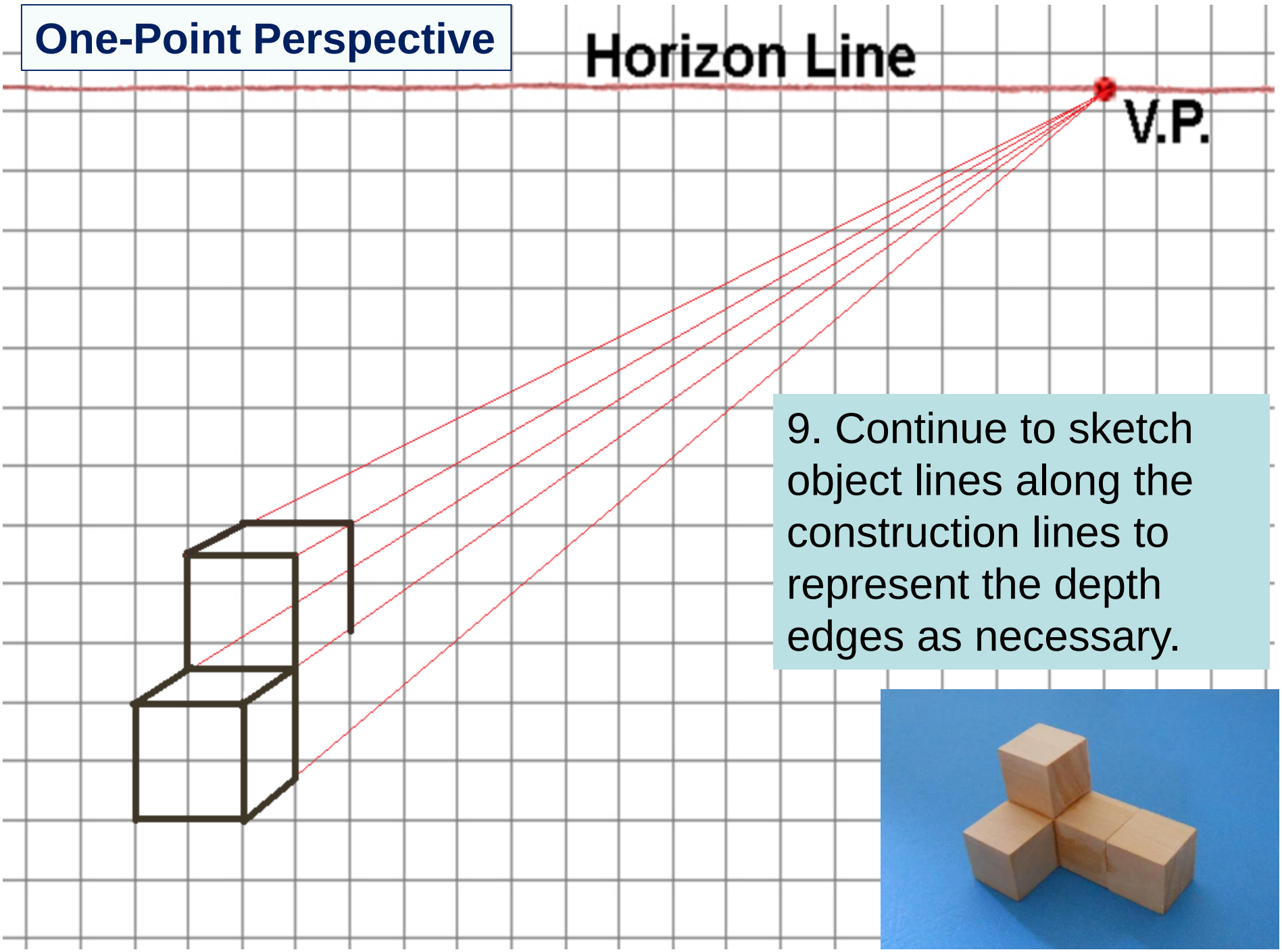
Horizon Line

V.P.





One-Point Perspective



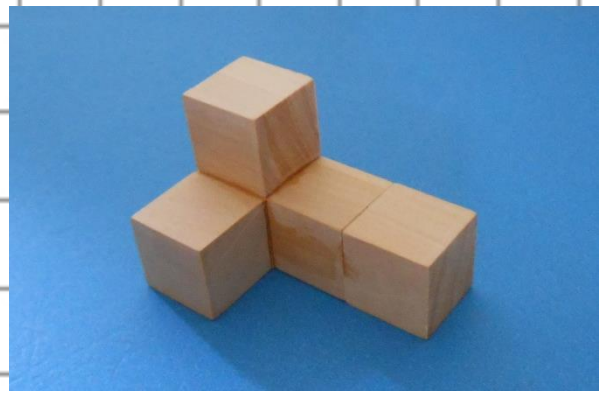
9. Continue to sketch object lines along the construction lines to represent the depth edges as necessary.

One-Point Perspective

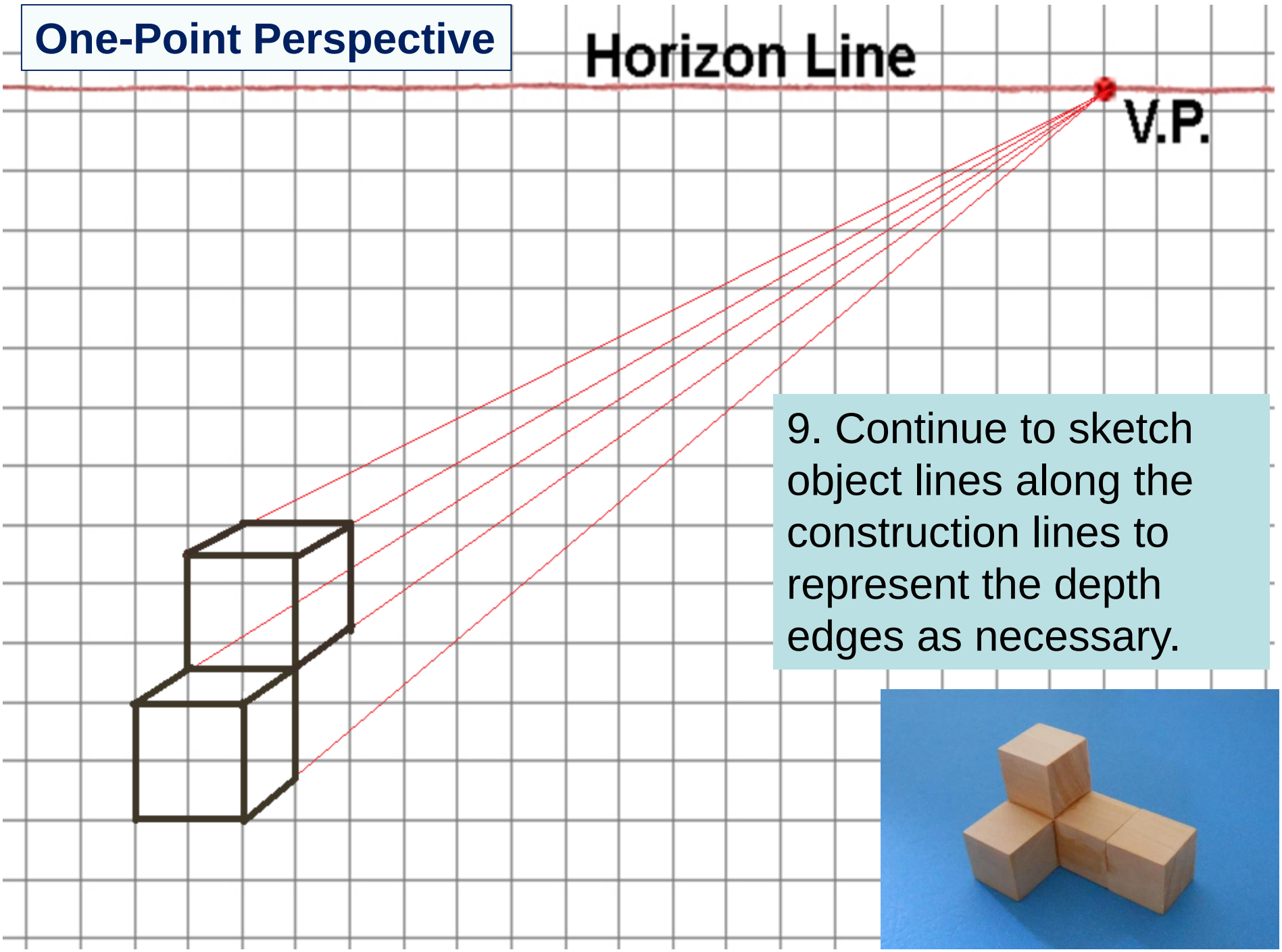
Horizon Line

V.P.

9. Continue to sketch object lines along the construction lines to represent the depth edges as necessary.



One-Point Perspective

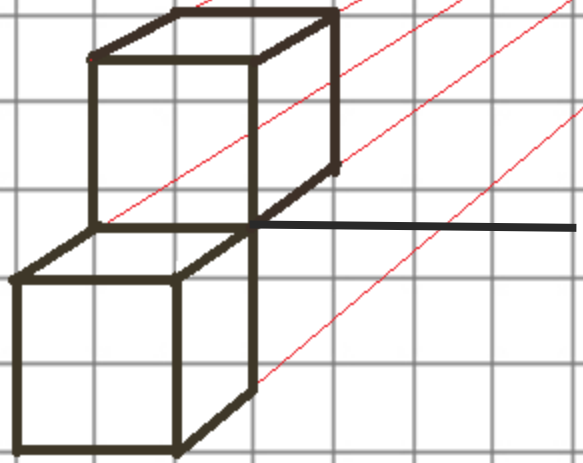


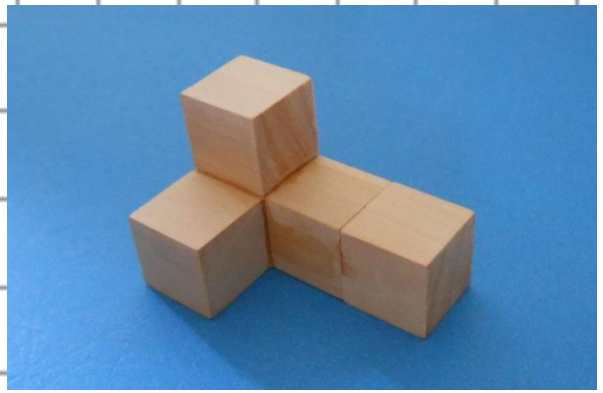
9. Continue to sketch object lines along the construction lines to represent the depth edges as necessary.

One-Point Perspective

Horizon Line

V.P.

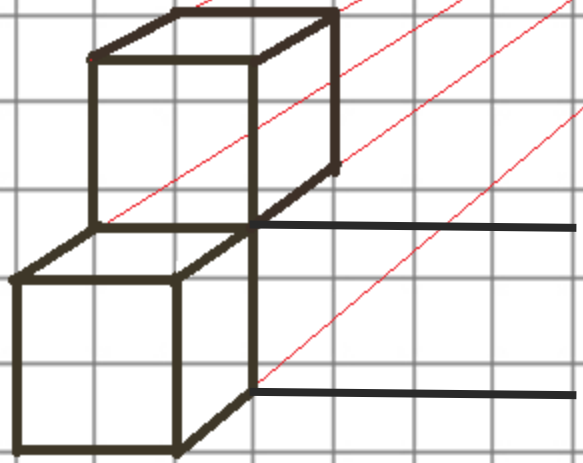


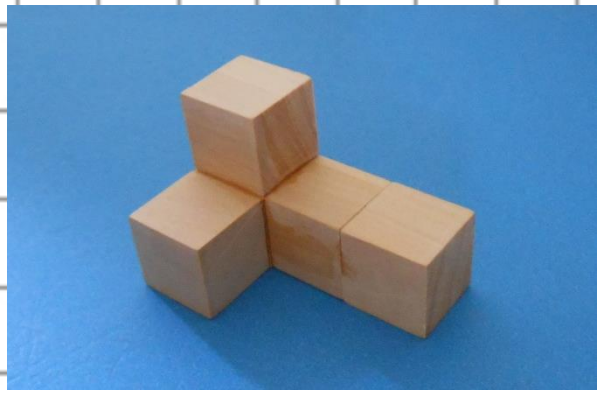


One-Point Perspective

Horizon Line

V.P.

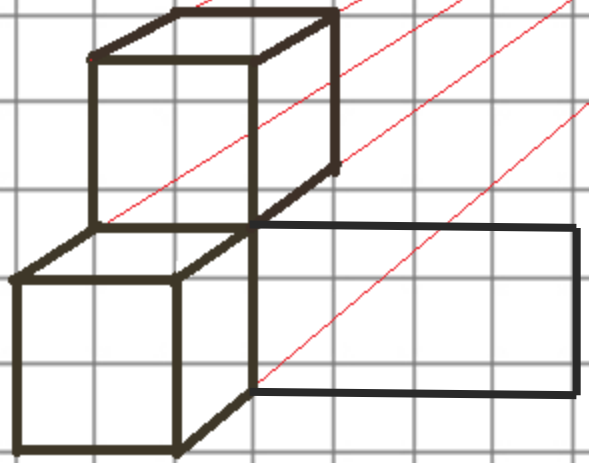


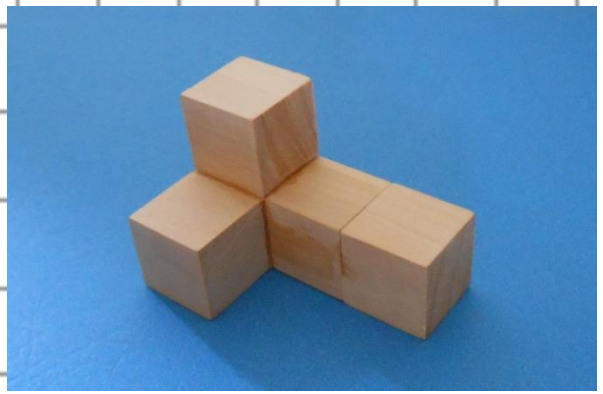


One-Point Perspective

Horizon Line

V.P.

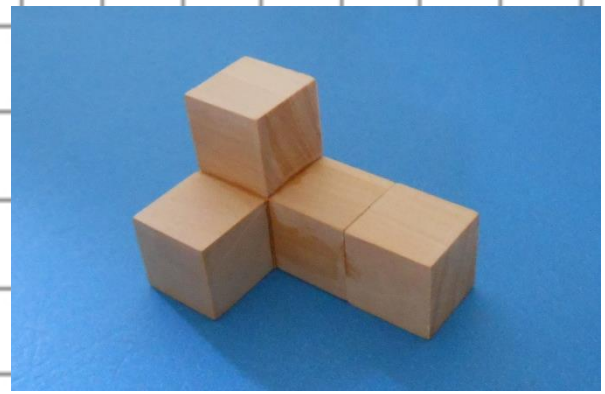




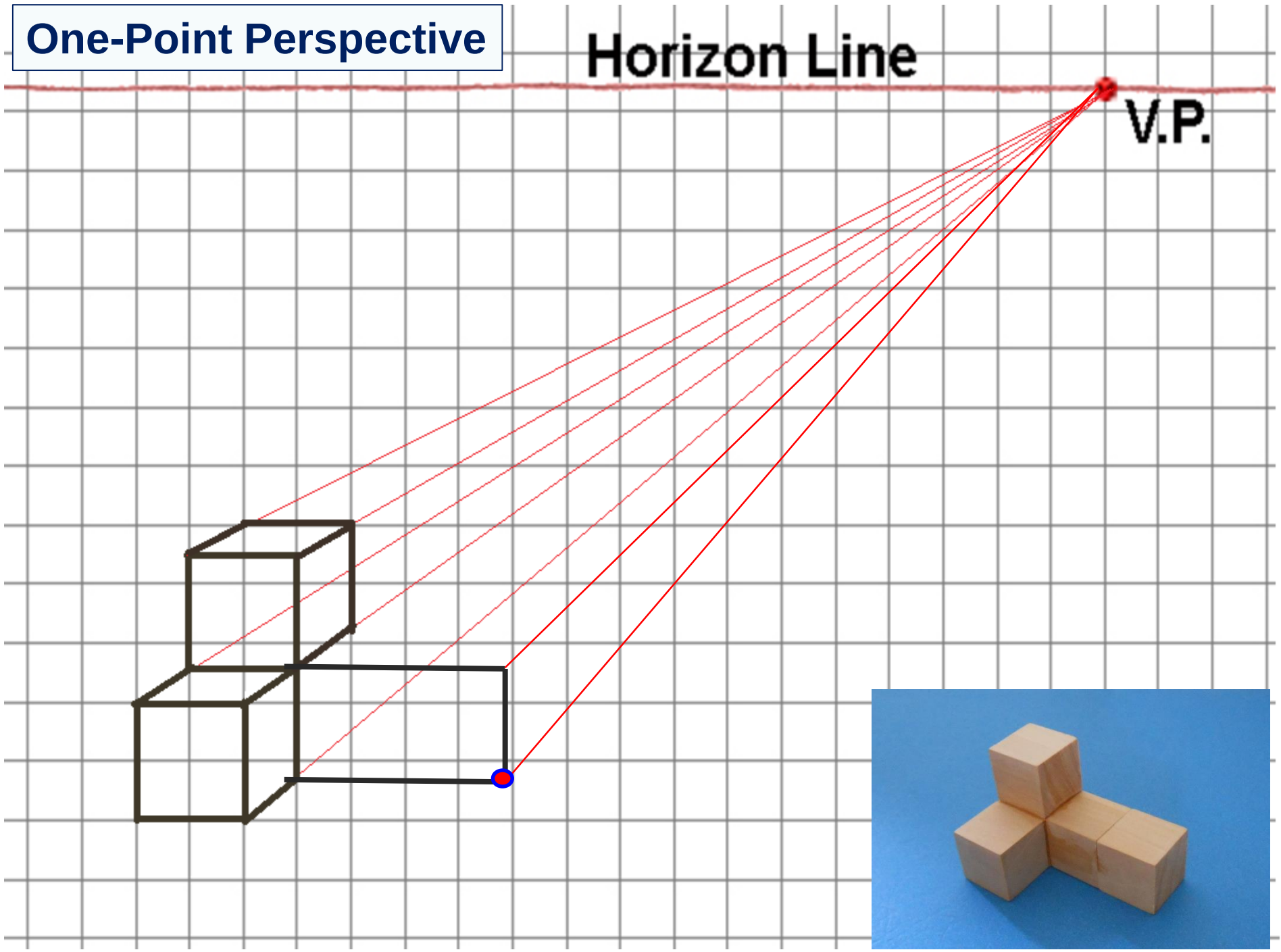
One-Point Perspective

Horizon Line

V.P.



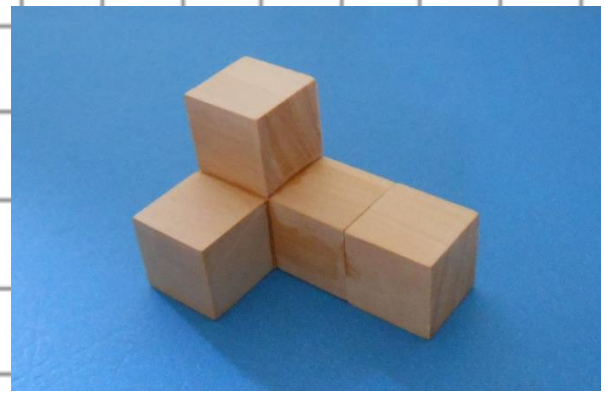
One-Point Perspective



One-Point Perspective

Horizon Line

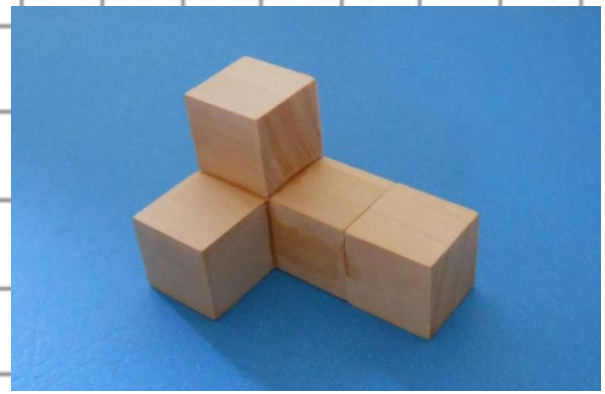
V.P.



One-Point Perspective

Horizon Line

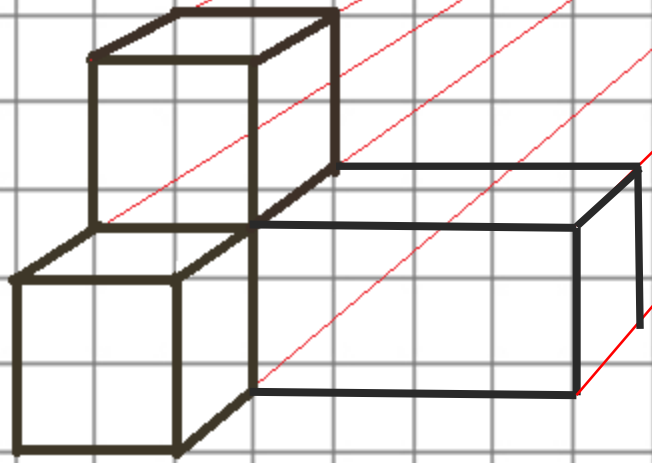
V.P.

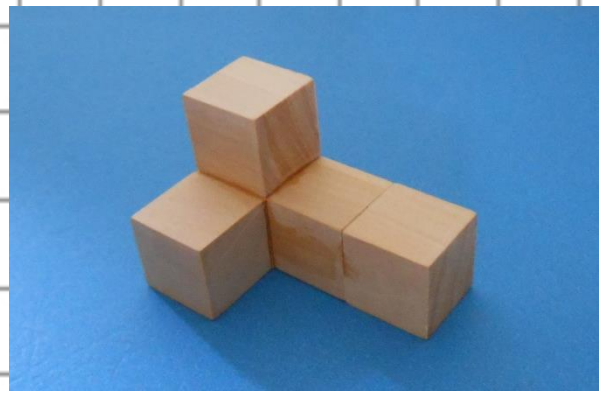


One-Point Perspective

Horizon Line

V.P.

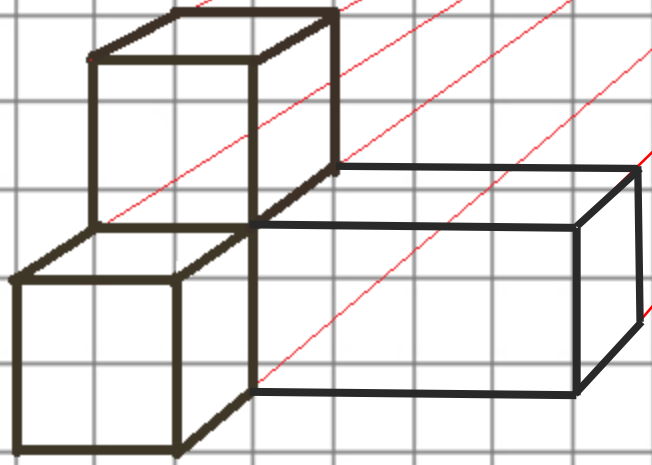


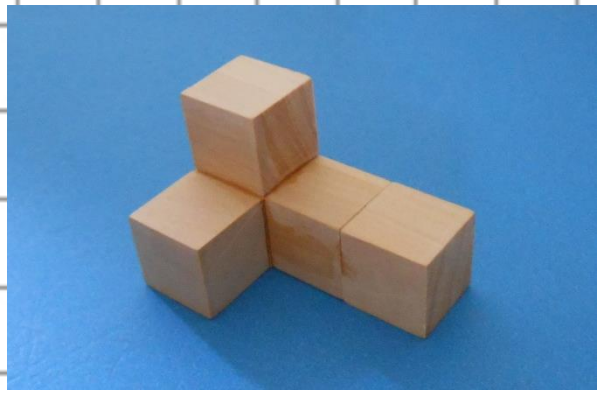


One-Point Perspective

Horizon Line

V.P.



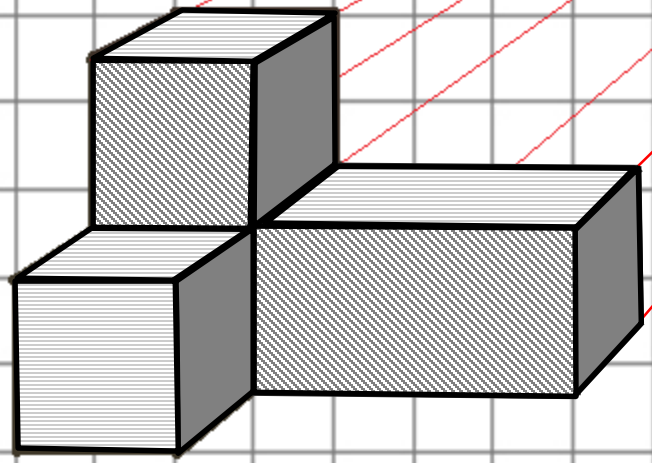


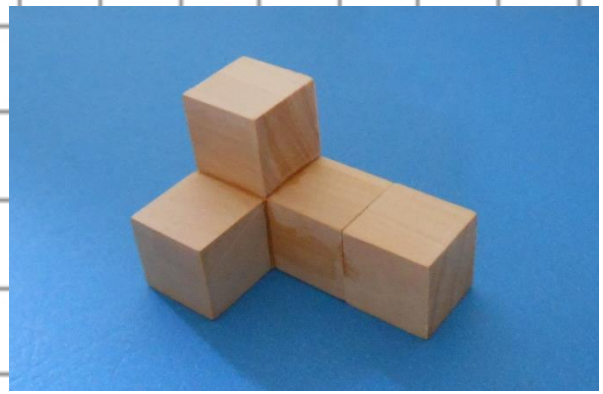
One-Point Perspective

Horizon Line

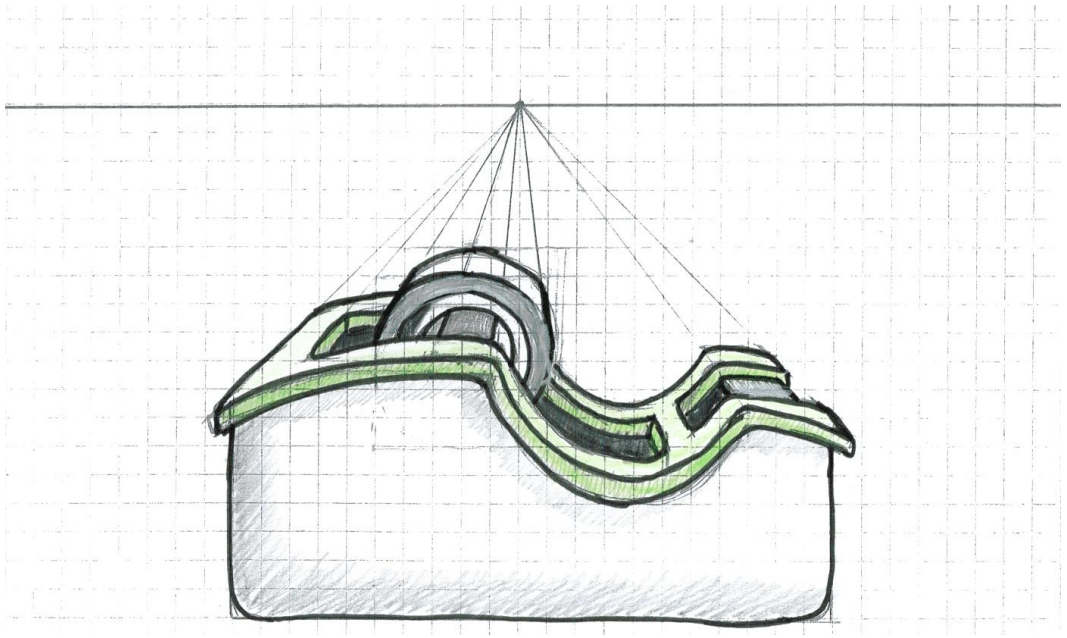
V.P.

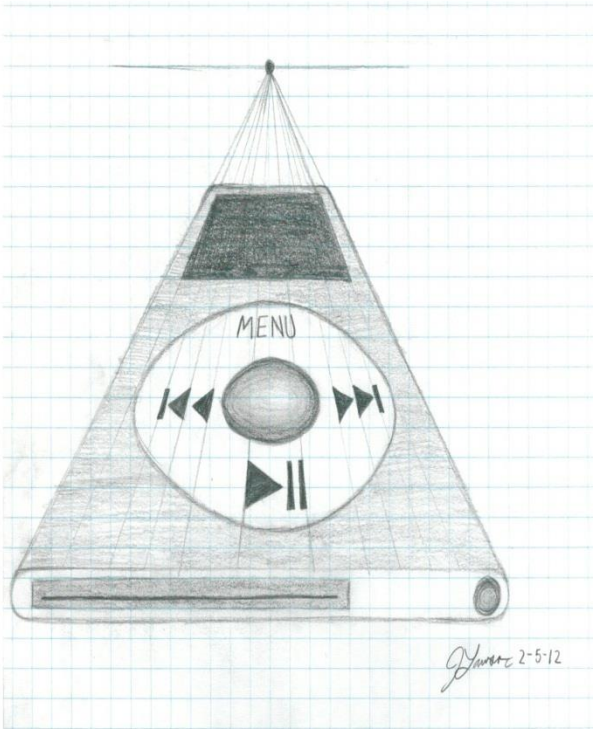
10. You may use tonal shading to enhance the appearance of the perspective sketch and create a more realistic representation.





One-Point Perspective Example

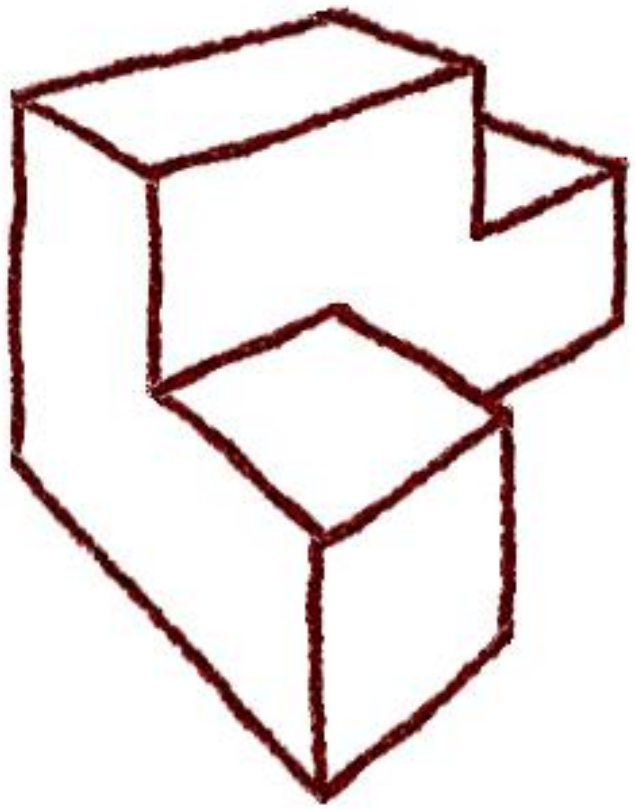




Two-Point Perspective

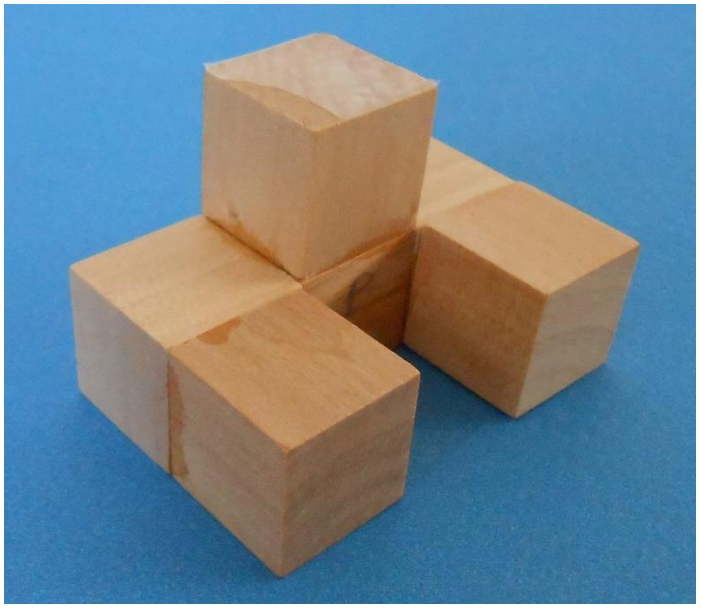
The ***two-point*** perspective is the most common perspective drawing.

- A step-by-step procedure will be explained for the perspective.

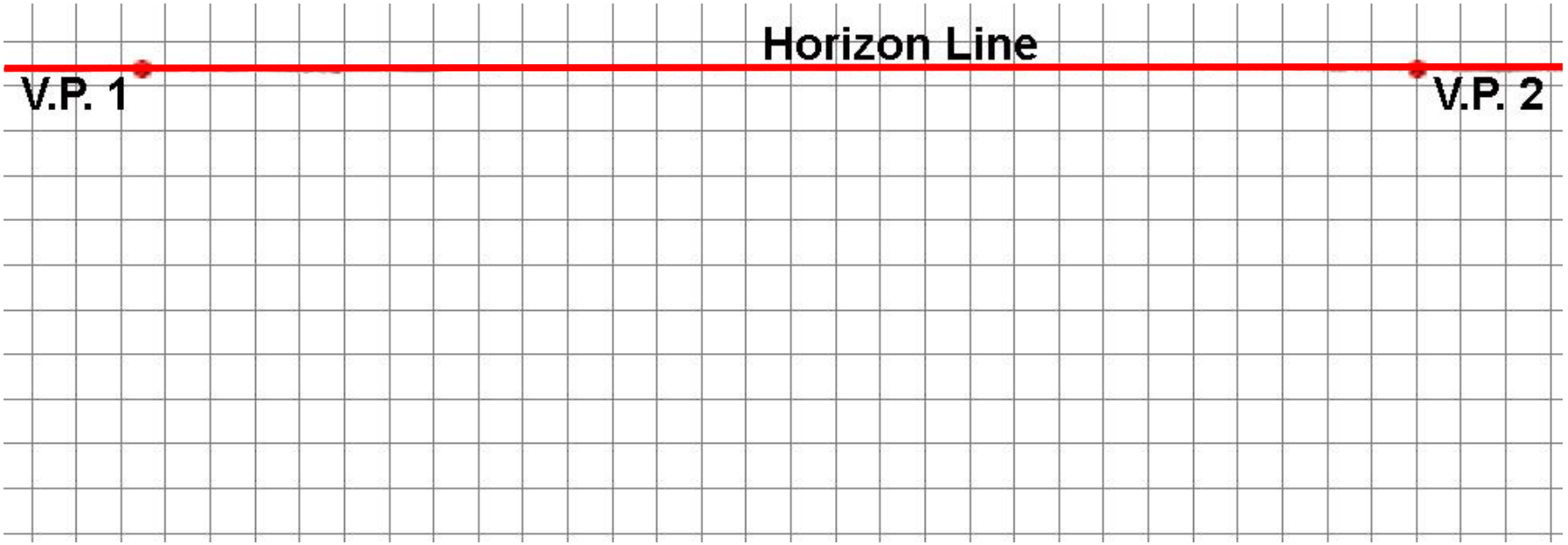


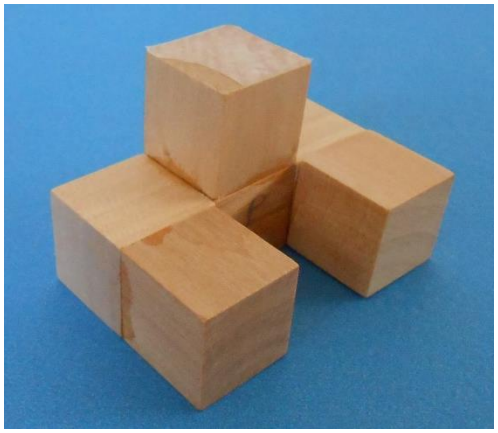
Two-Point Perspective

The following slides show the steps in creating a two-point perspective of the puzzle piece shown below.



Two-Point Perspective





1. Sketch a horizontal line across the upper portion of the paper to represent the horizon, and identify two vanishing points.

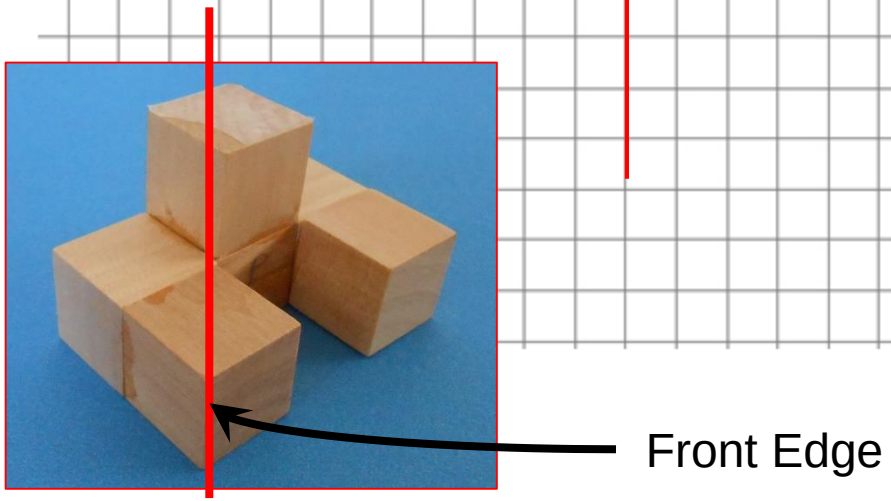
The vanishing points should can be placed toward each end of the horizon line.

Two-Point Perspective

Horizon Line

V.P. 1

V.P. 2



Front Edge

2. Sketch a vertical construction line to represent the front edge of the object.

The construction line can be drawn below, above, or through the horizon line.

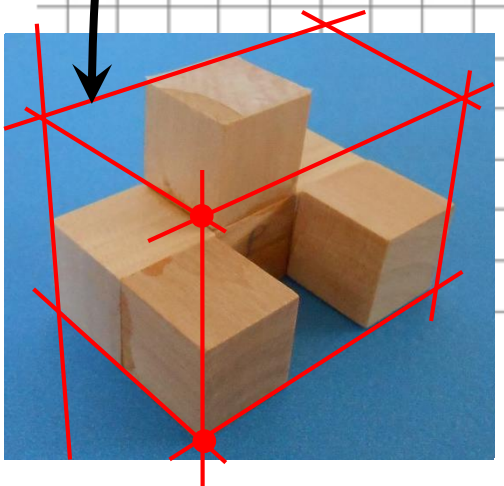
Two-Point Perspective

Horizon Line

V.P. 1

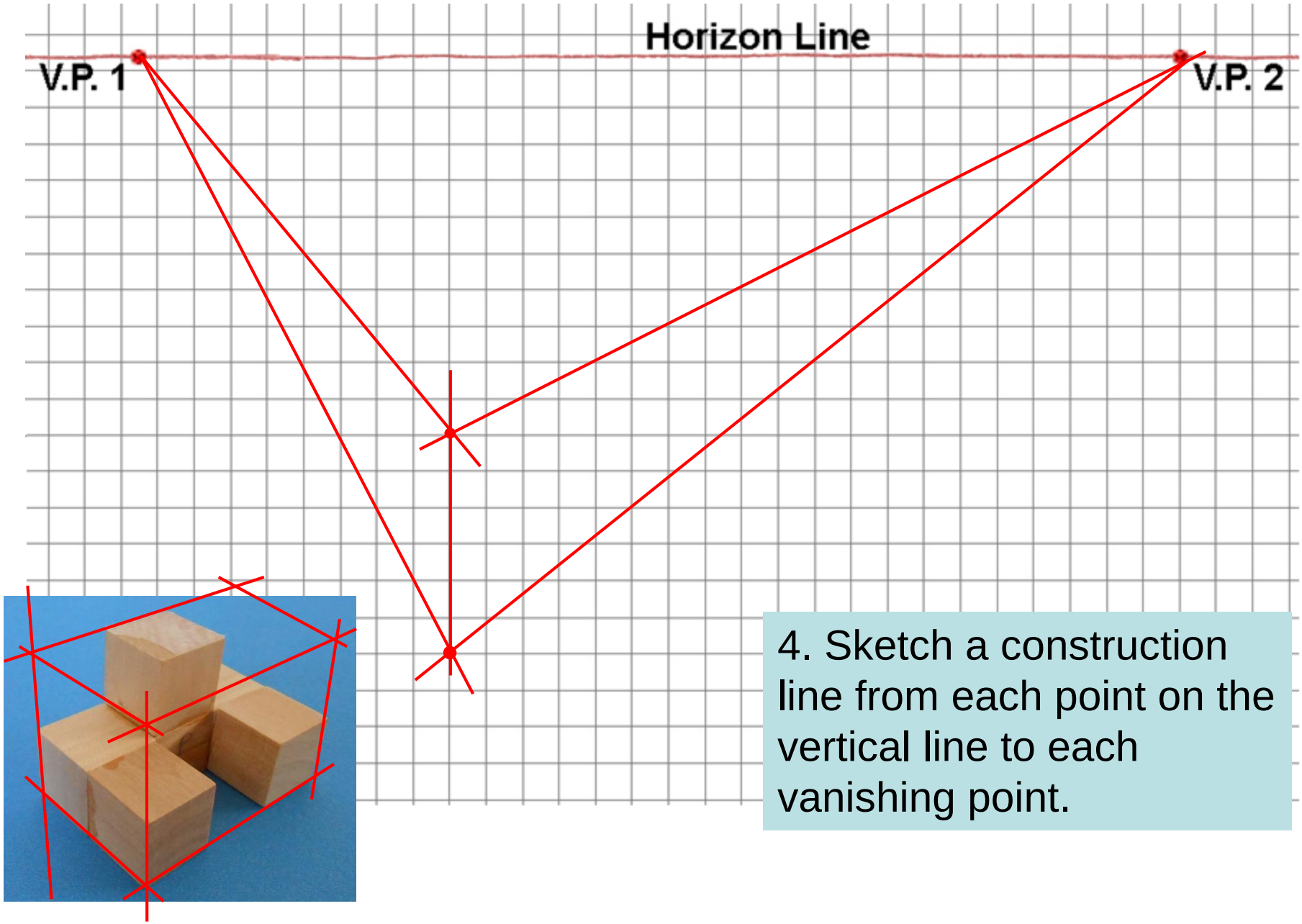
V.P. 2

An imaginary box encloses the entire object



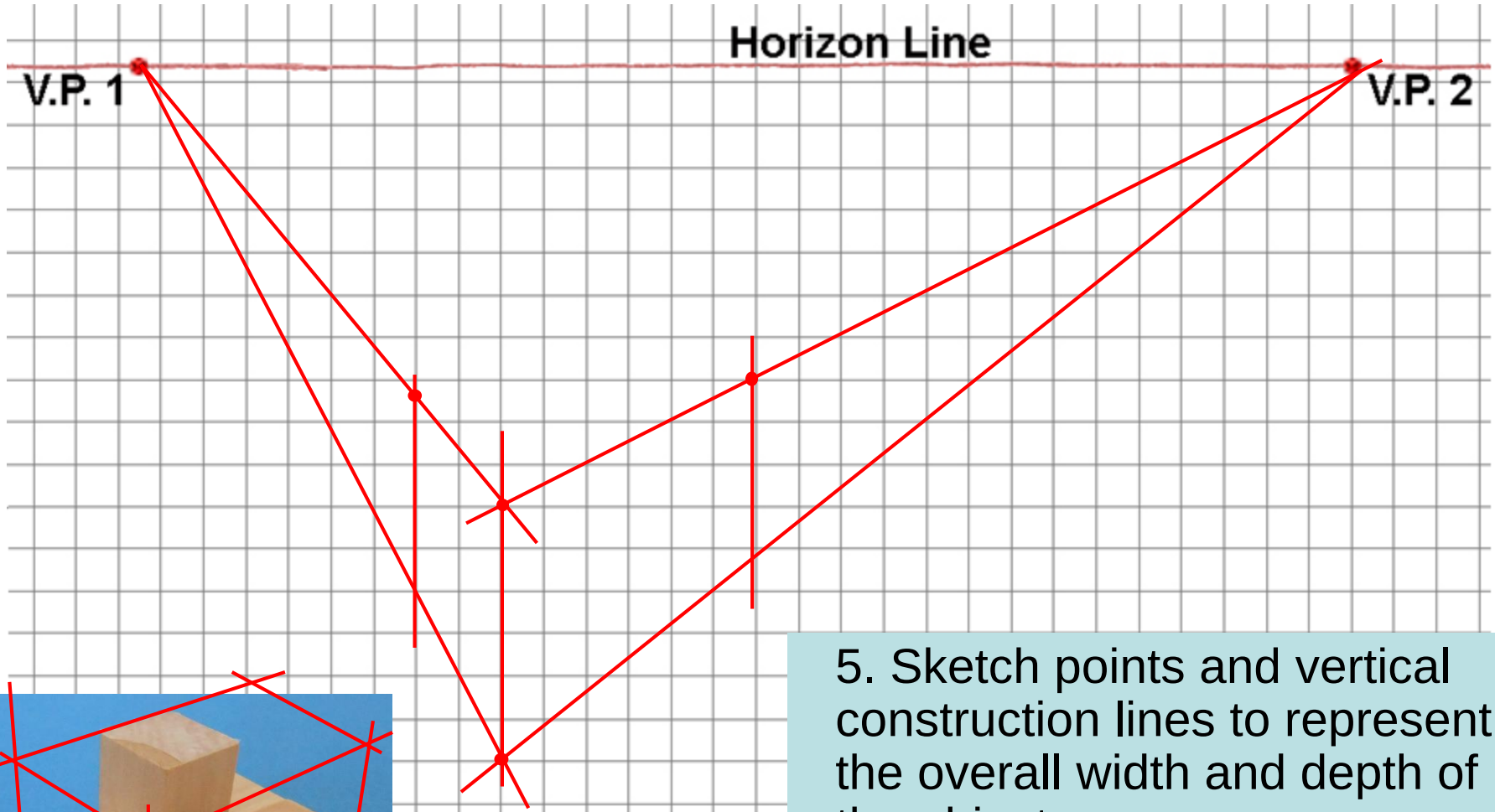
3. Locate two points on the construction line to represent the top and bottom corners of the box within which the object will be sketched.

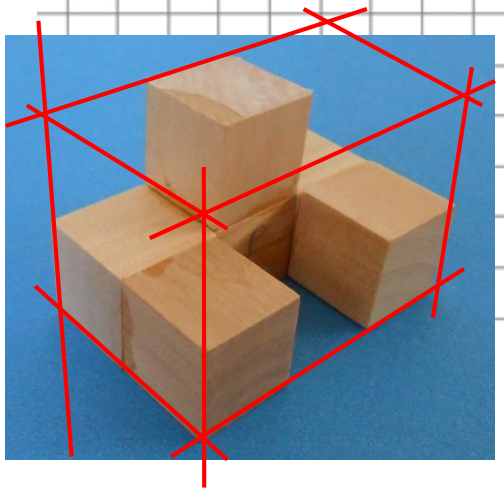
Two-Point Perspective



4. Sketch a construction line from each point on the vertical line to each vanishing point.

Two-Point Perspective





5. Sketch points and vertical construction lines to represent the overall width and depth of the object.

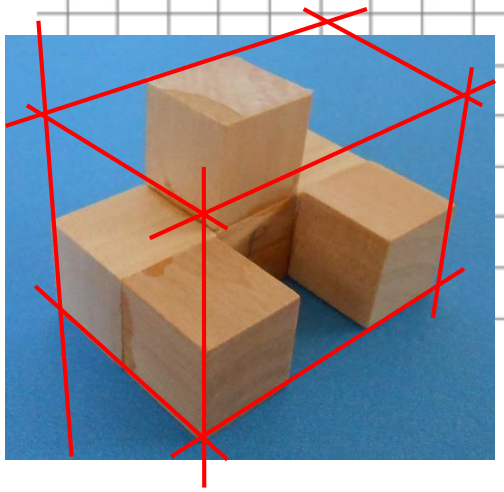
You will need to estimate the location of these to make the box proportional.

Two-Point Perspective

Horizon Line

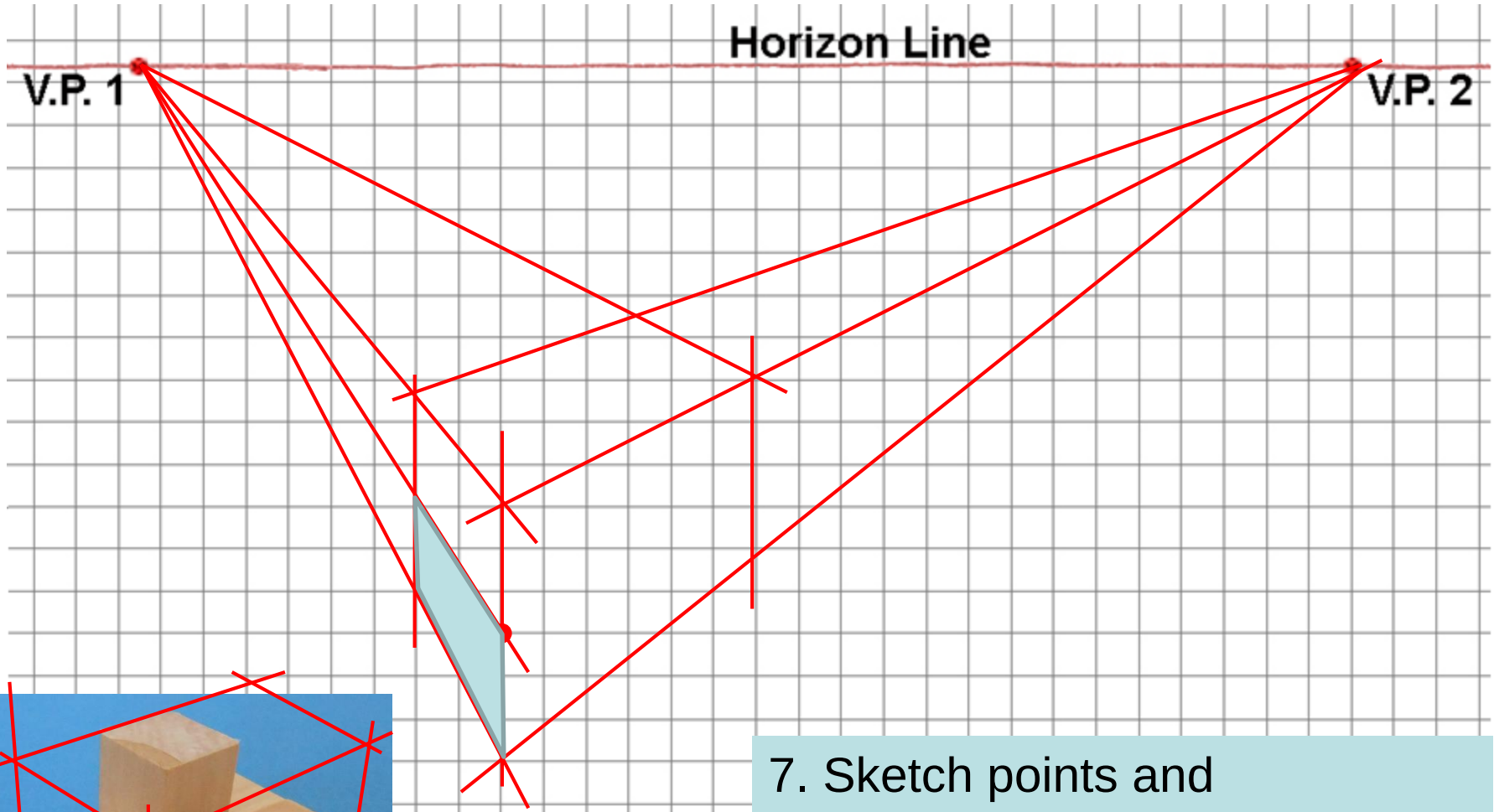
V.P. 1

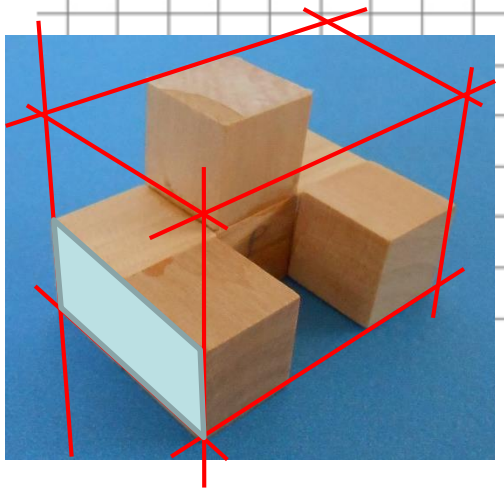
V.P. 2



6. Sketch construction lines to represent the top back edges of the box.

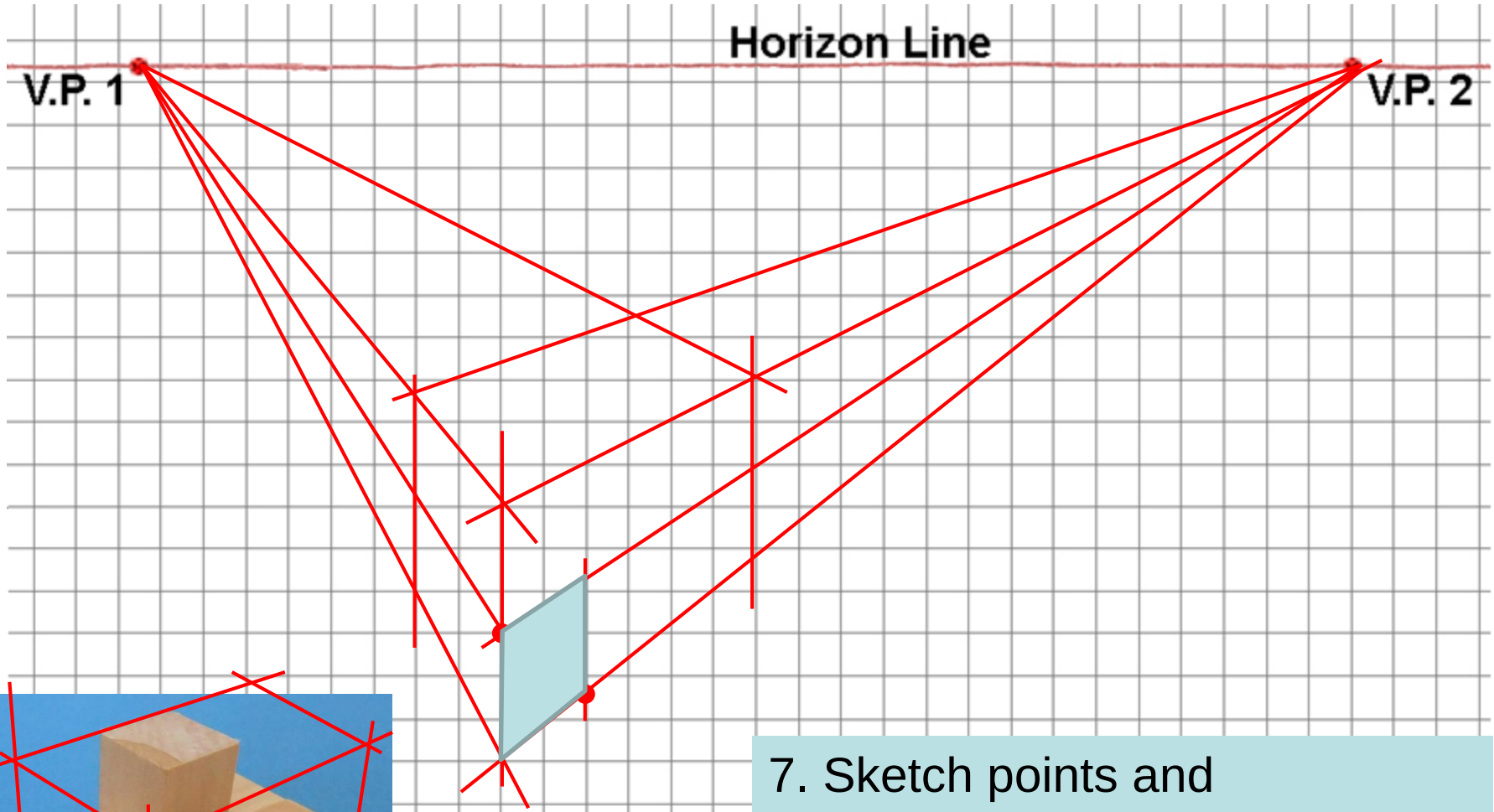
Two-Point Perspective

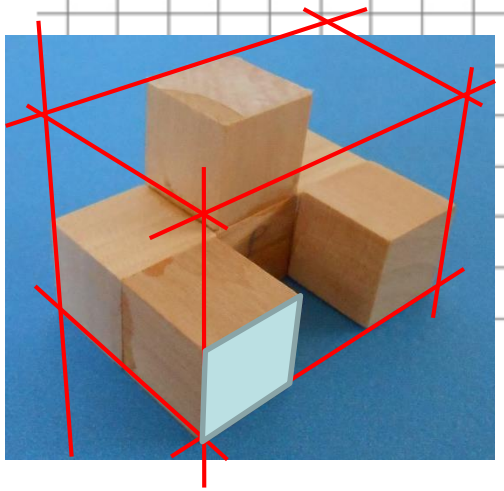




7. Sketch points and construction lines to identify the edges of the object faces that occur on the visible surfaces of the box.

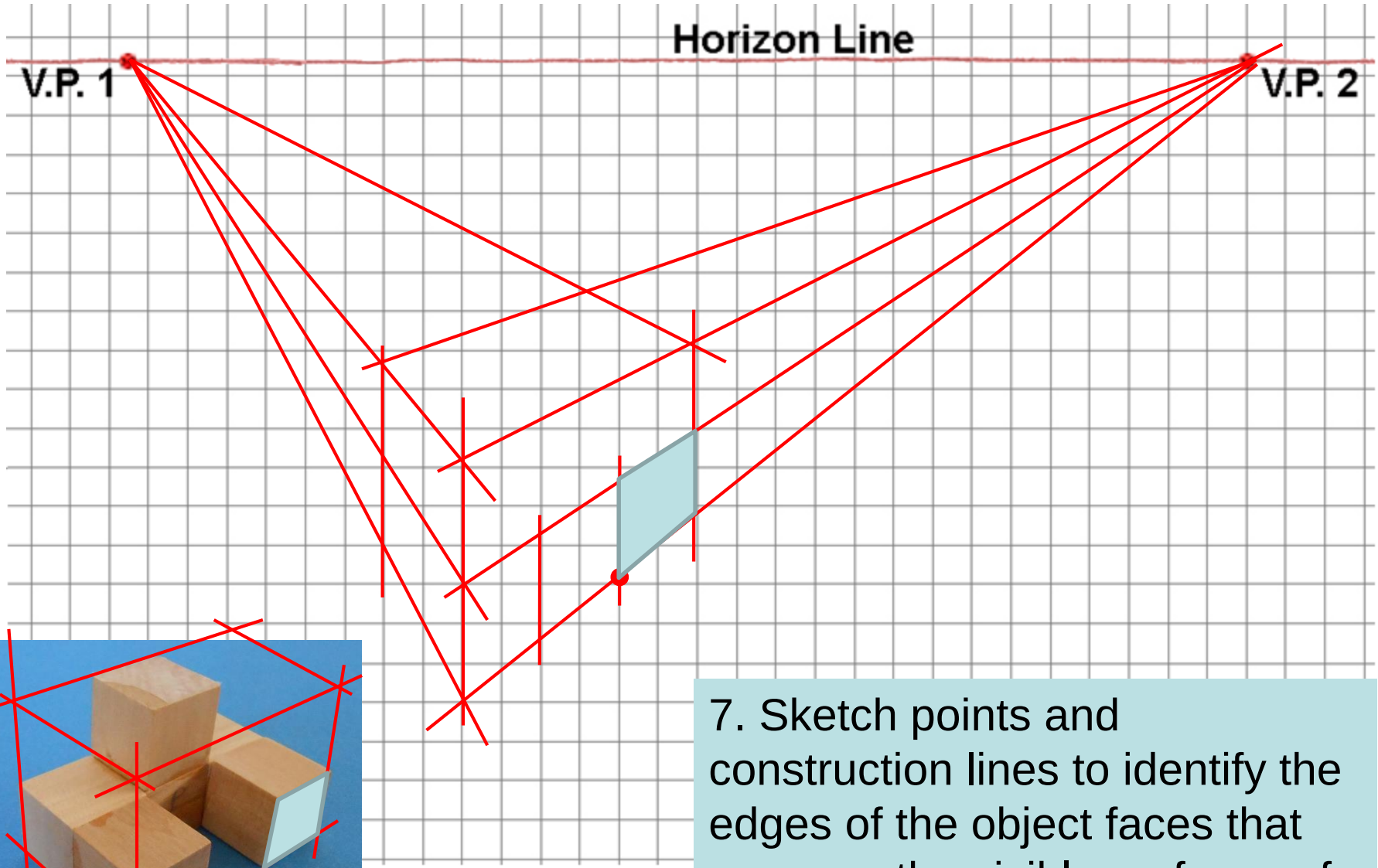
Two-Point Perspective

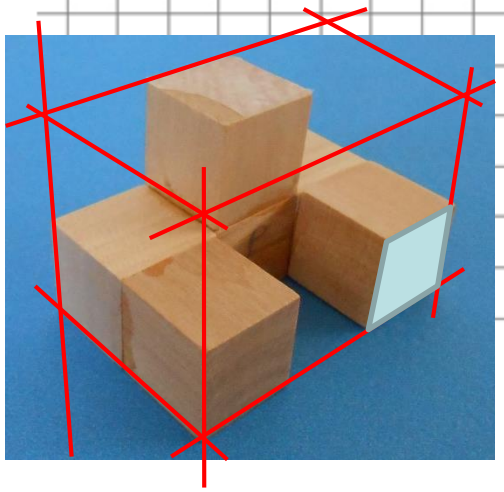




7. Sketch points and construction lines to identify the edges of the object faces that occur on the visible surfaces of the box.

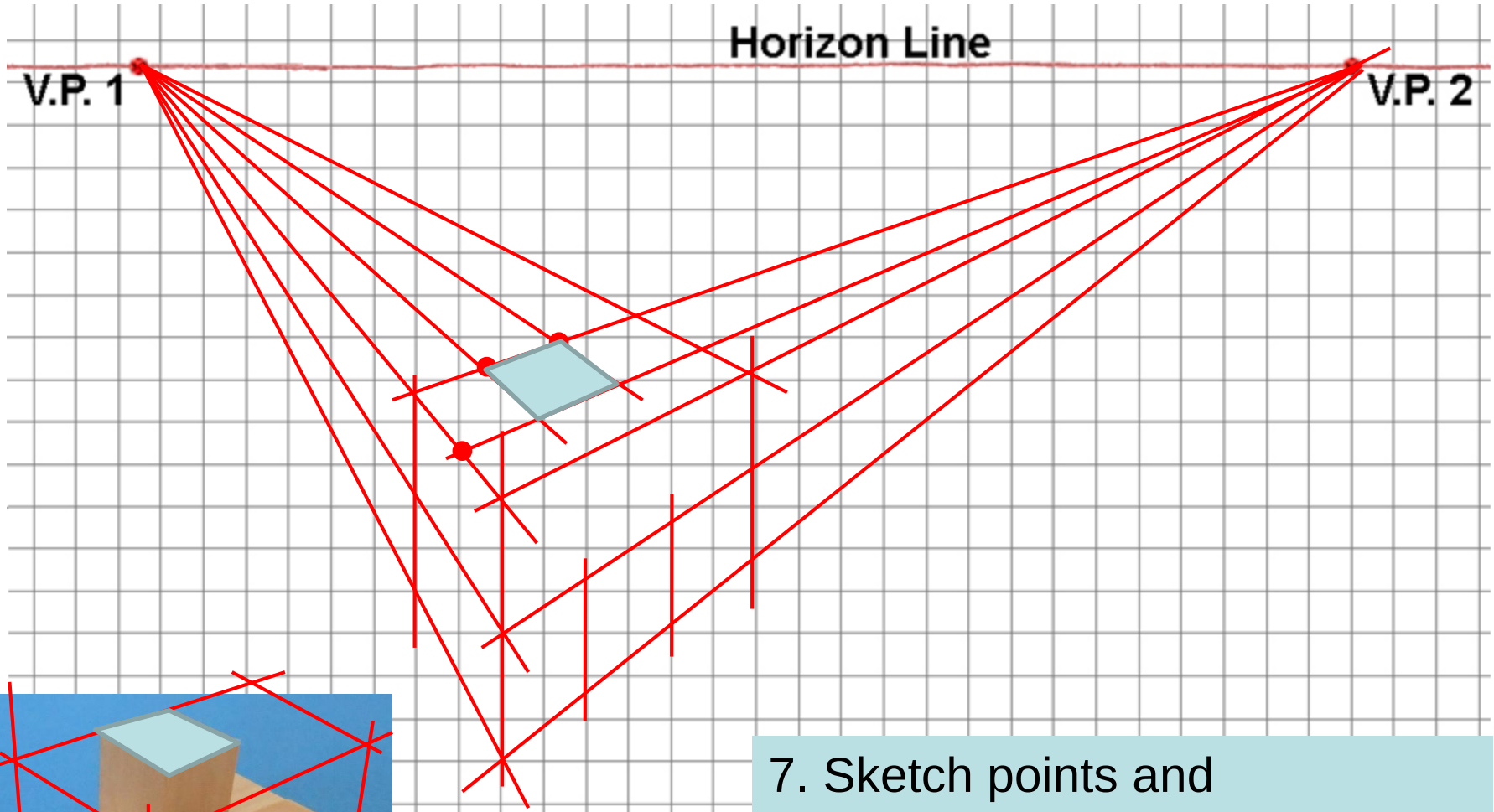
Two-Point Perspective

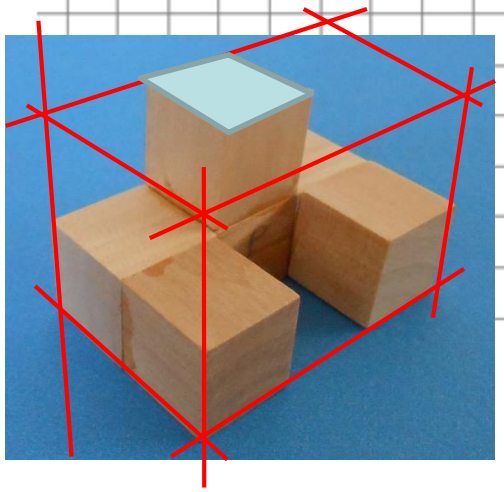




7. Sketch points and construction lines to identify the edges of the object faces that occur on the visible surfaces of the box.

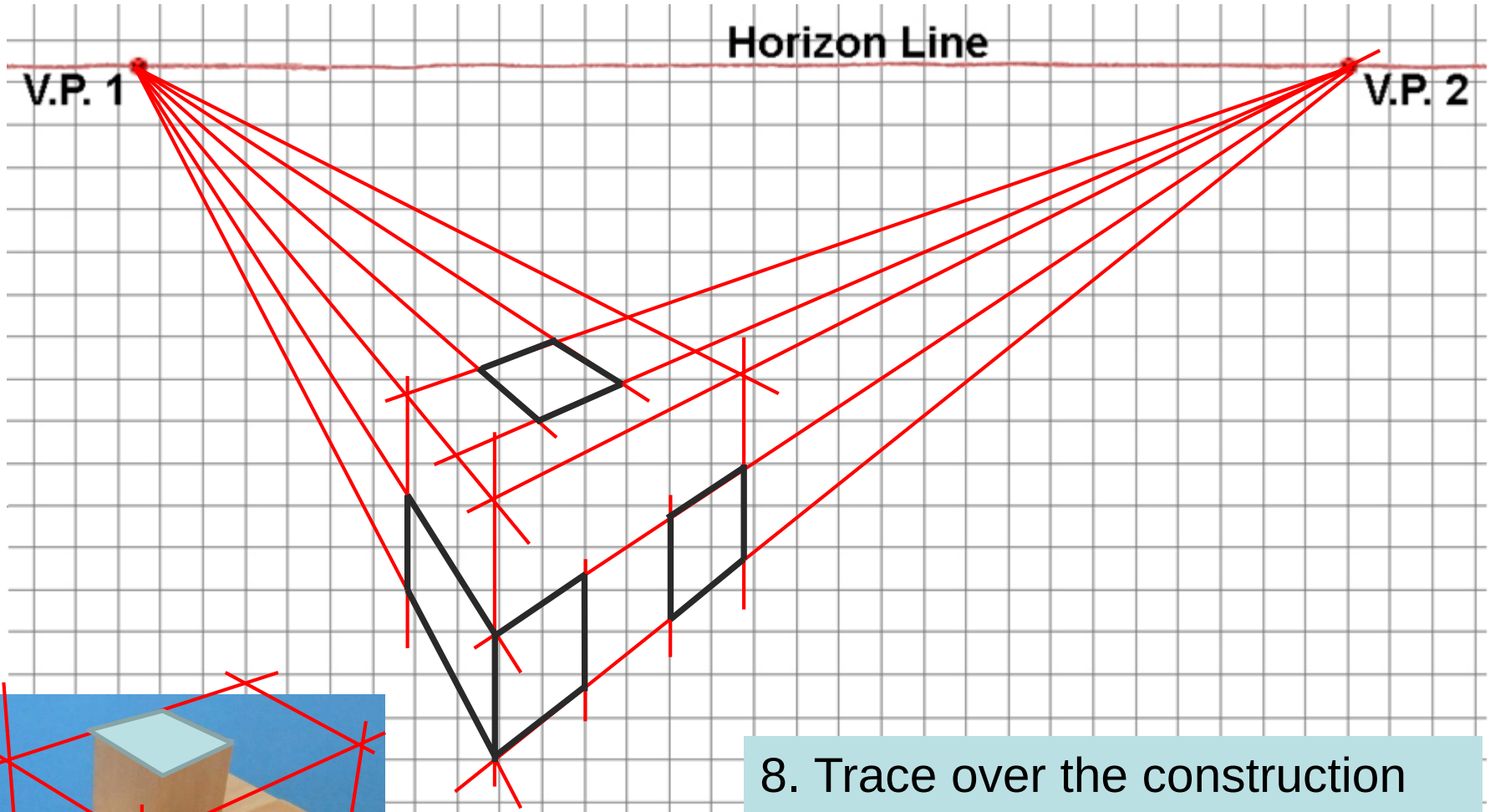
Two-Point Perspective

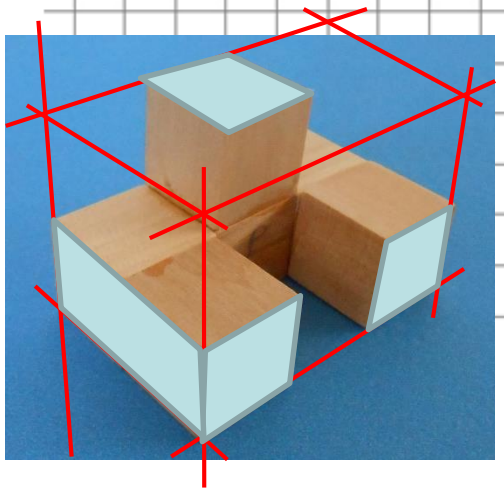




7. Sketch points and construction lines to identify the edges of the object faces that occur on the visible surfaces of the box.

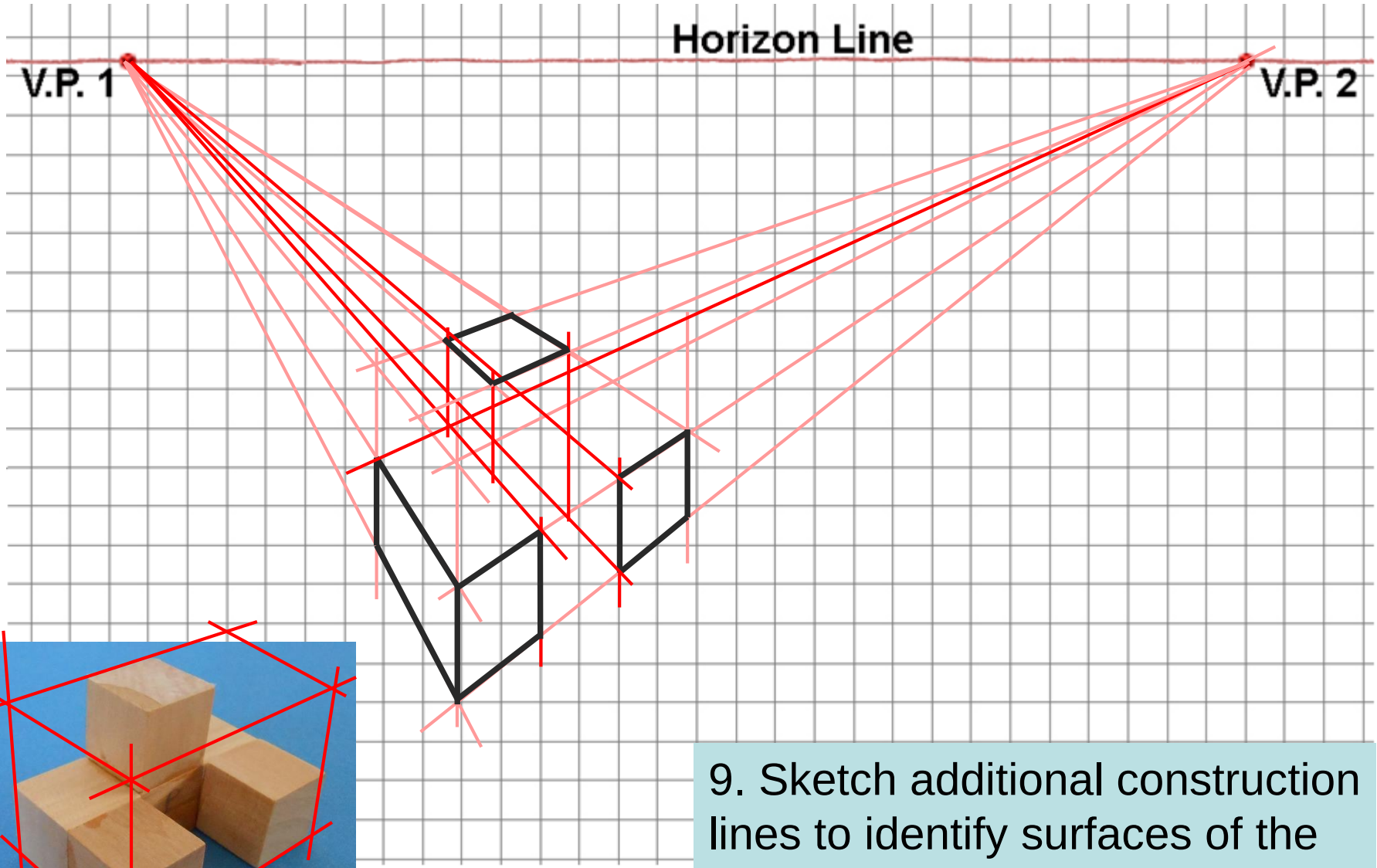
Two-Point Perspective

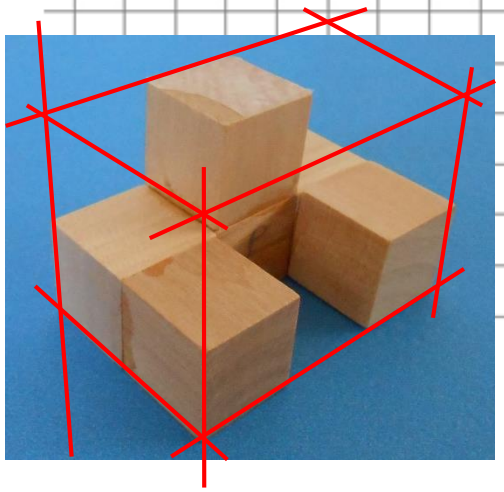




8. Trace over the construction lines to delineate the edges of the object faces that occur on the visible surfaces of the box.

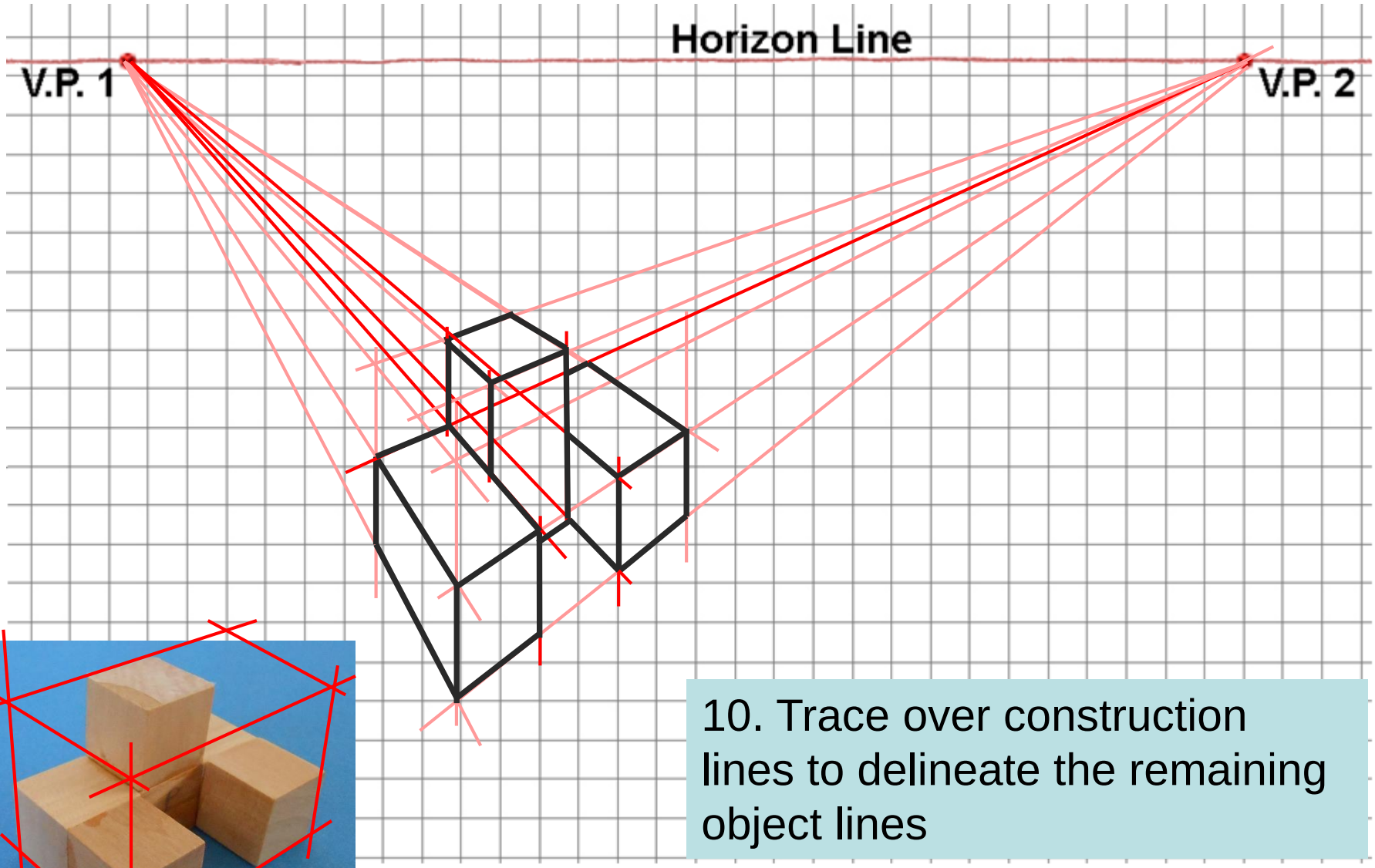
Two-Point Perspective

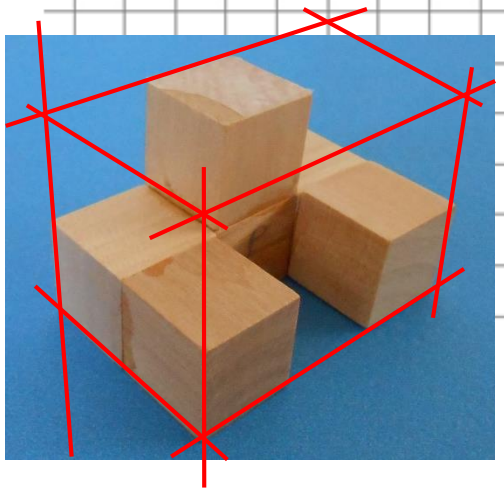




9. Sketch additional construction lines to identify surfaces of the object inside of the box.

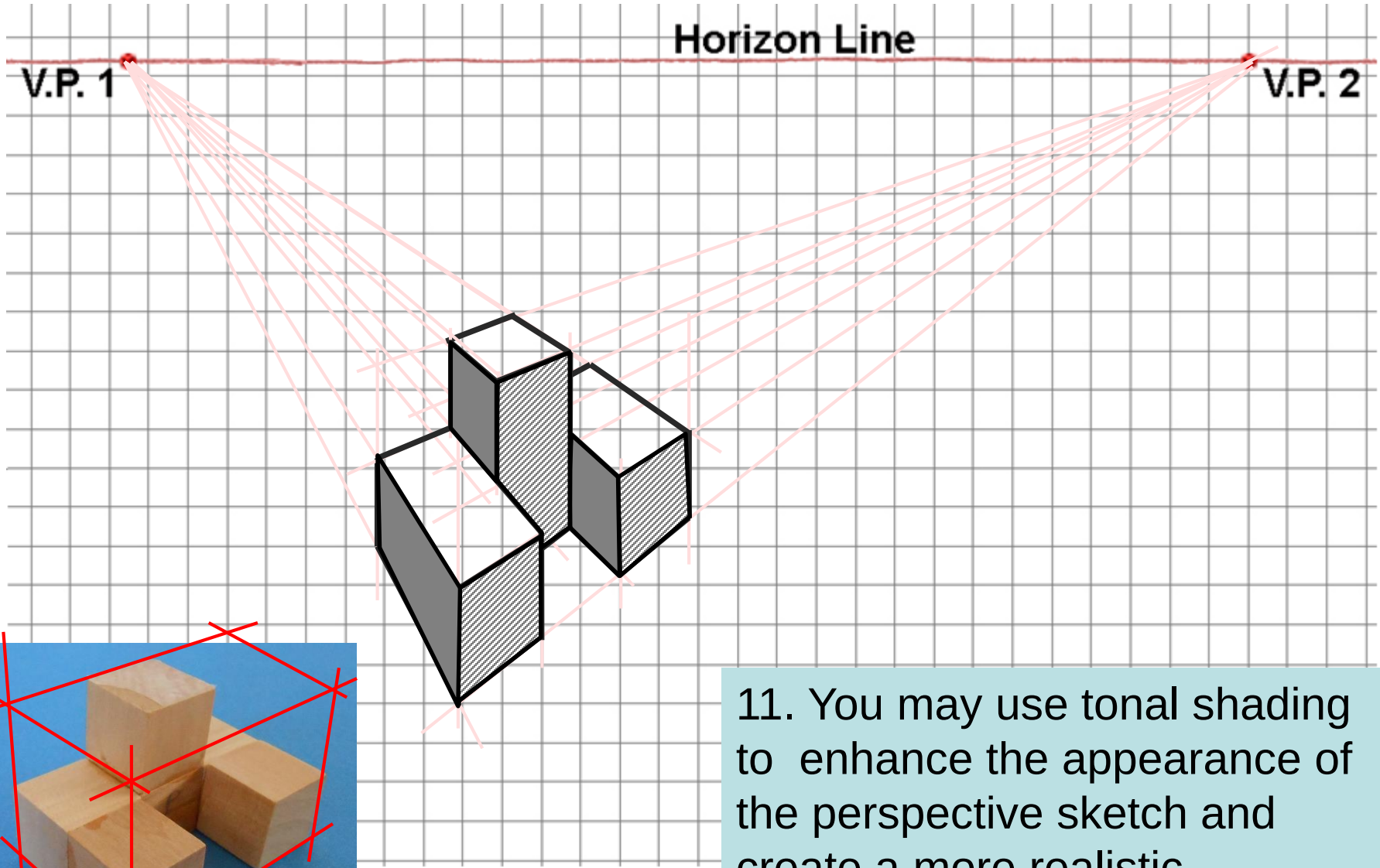
Two-Point Perspective

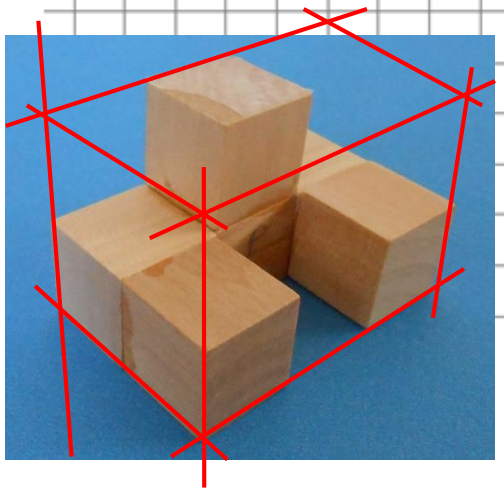




10. Trace over construction lines to delineate the remaining object lines

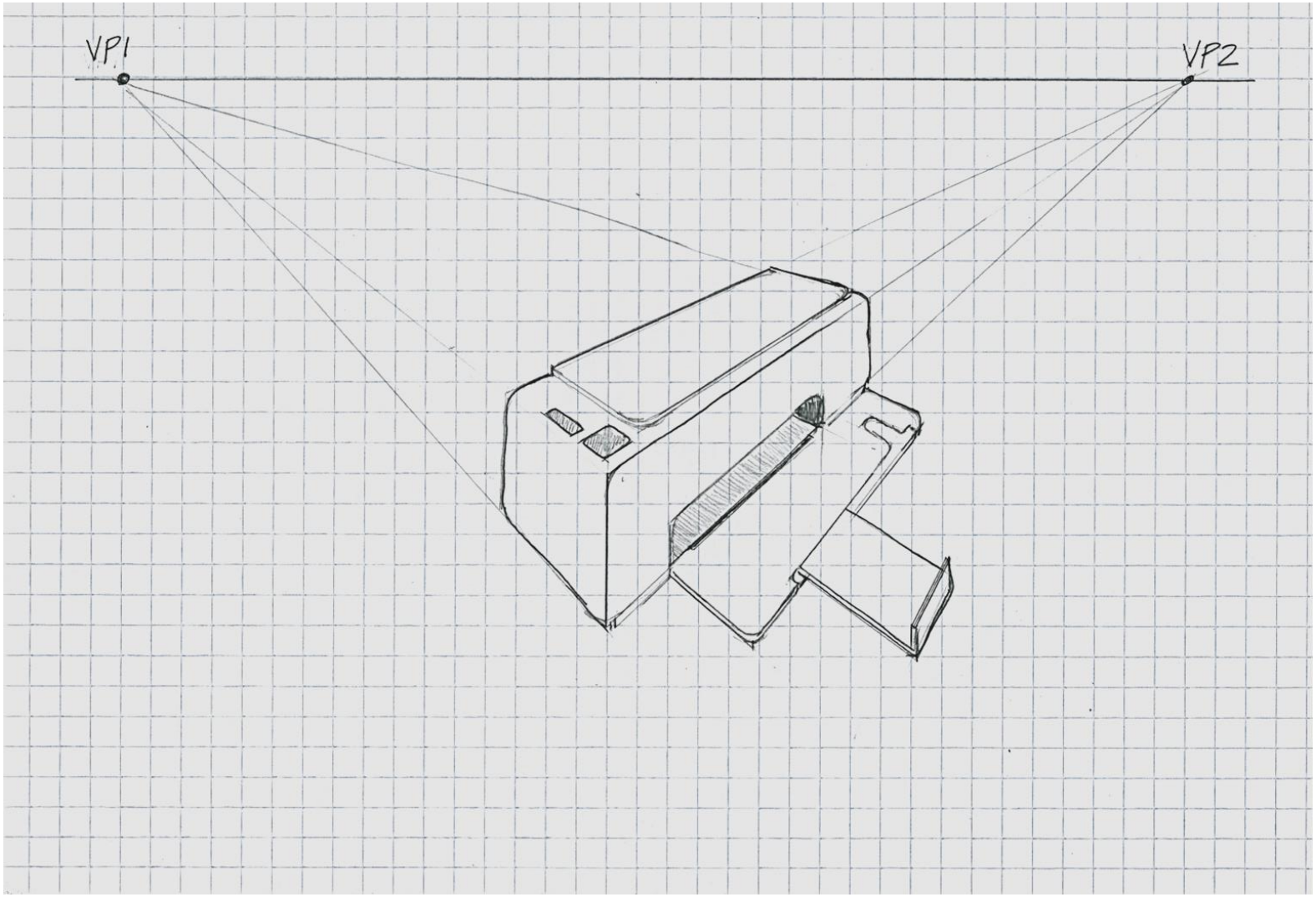
Two-Point Perspective



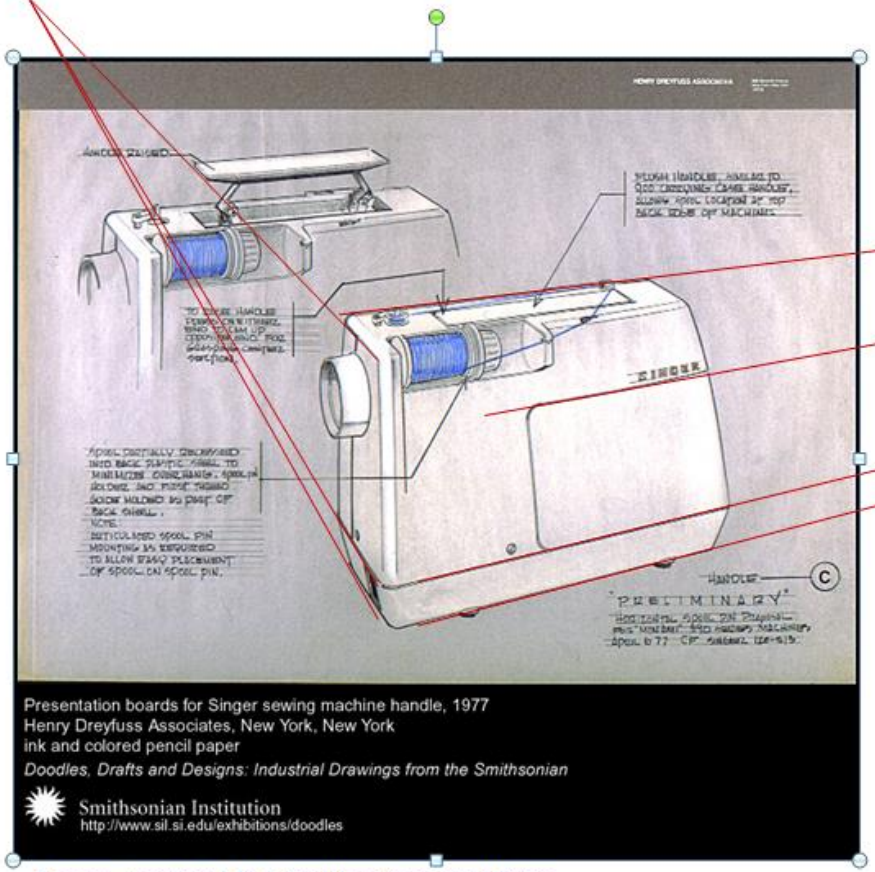


11. You may use tonal shading to enhance the appearance of the perspective sketch and create a more realistic representation.

Two-Point Perspective Example



Two-Point Perspective Example



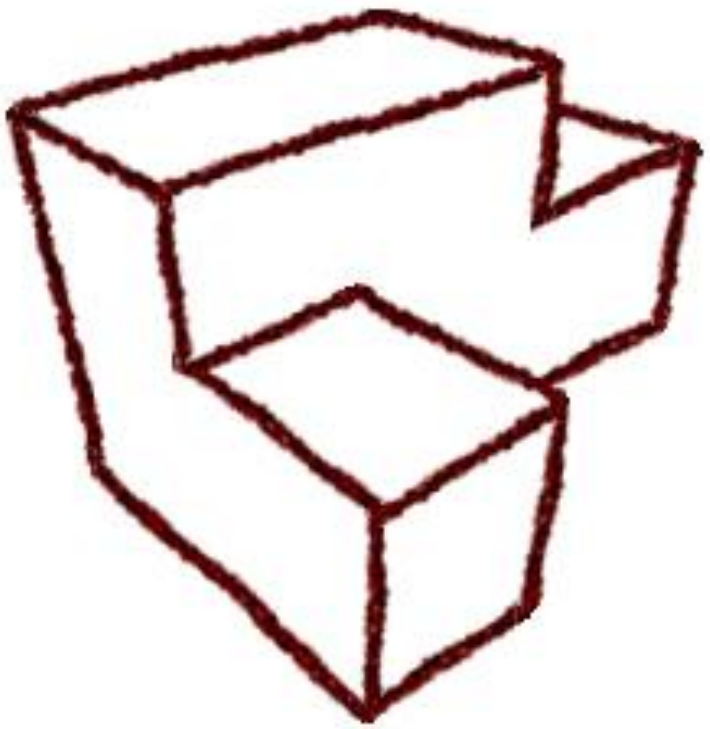
Presentation boards for Singer sewing machine handle, 1977
Henry Dreyfuss Associates, New York, New York
ink and colored pencil paper
Doodles, Drafts and Designs: Industrial Drawings from the Smithsonian
Smithsonian Institution
http://www.sil.si.edu/exhibitions/doodles

Image courtesy the Smithsonian Institute:
http://www.sil.si/exhibitions/doodles

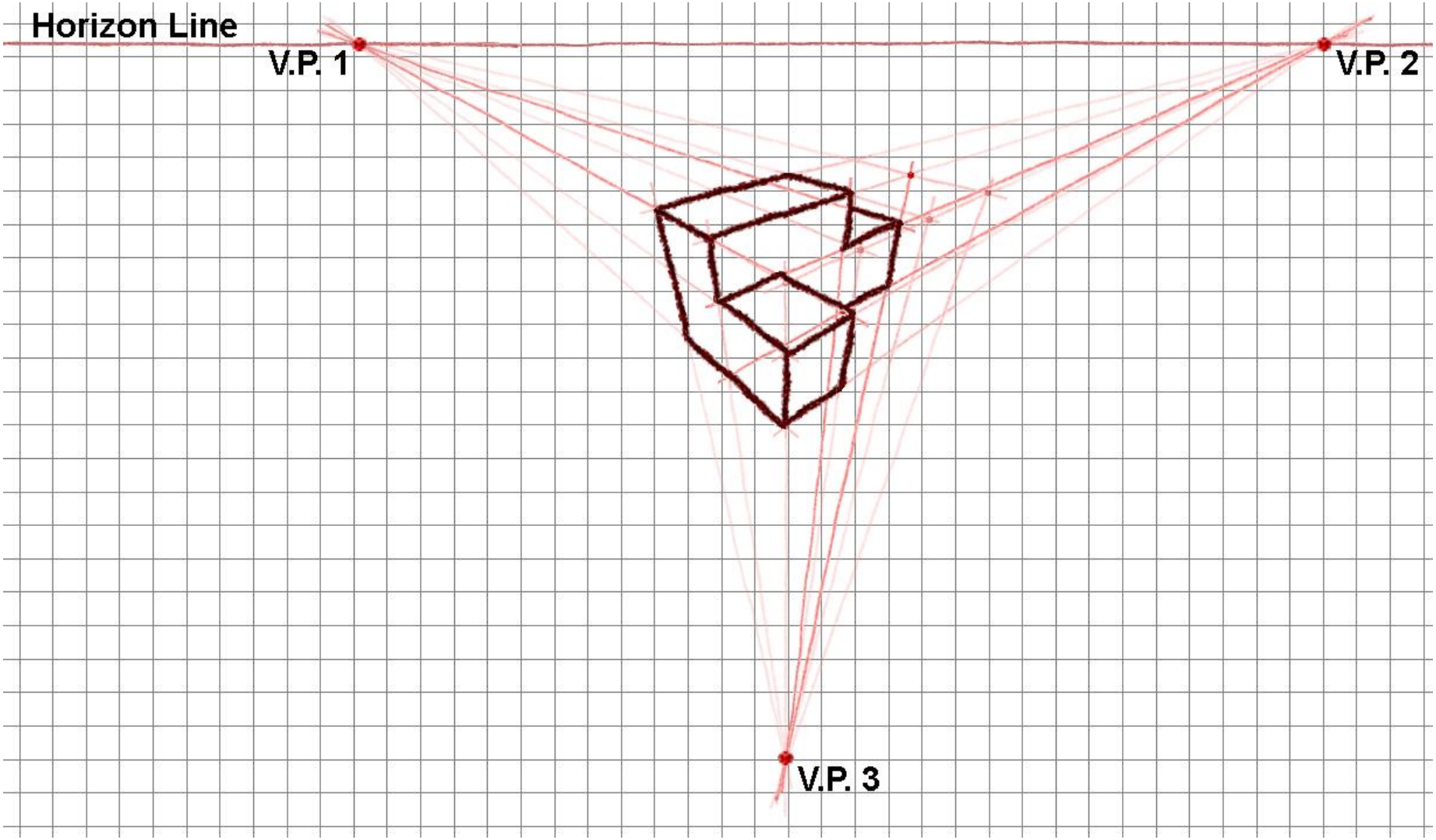
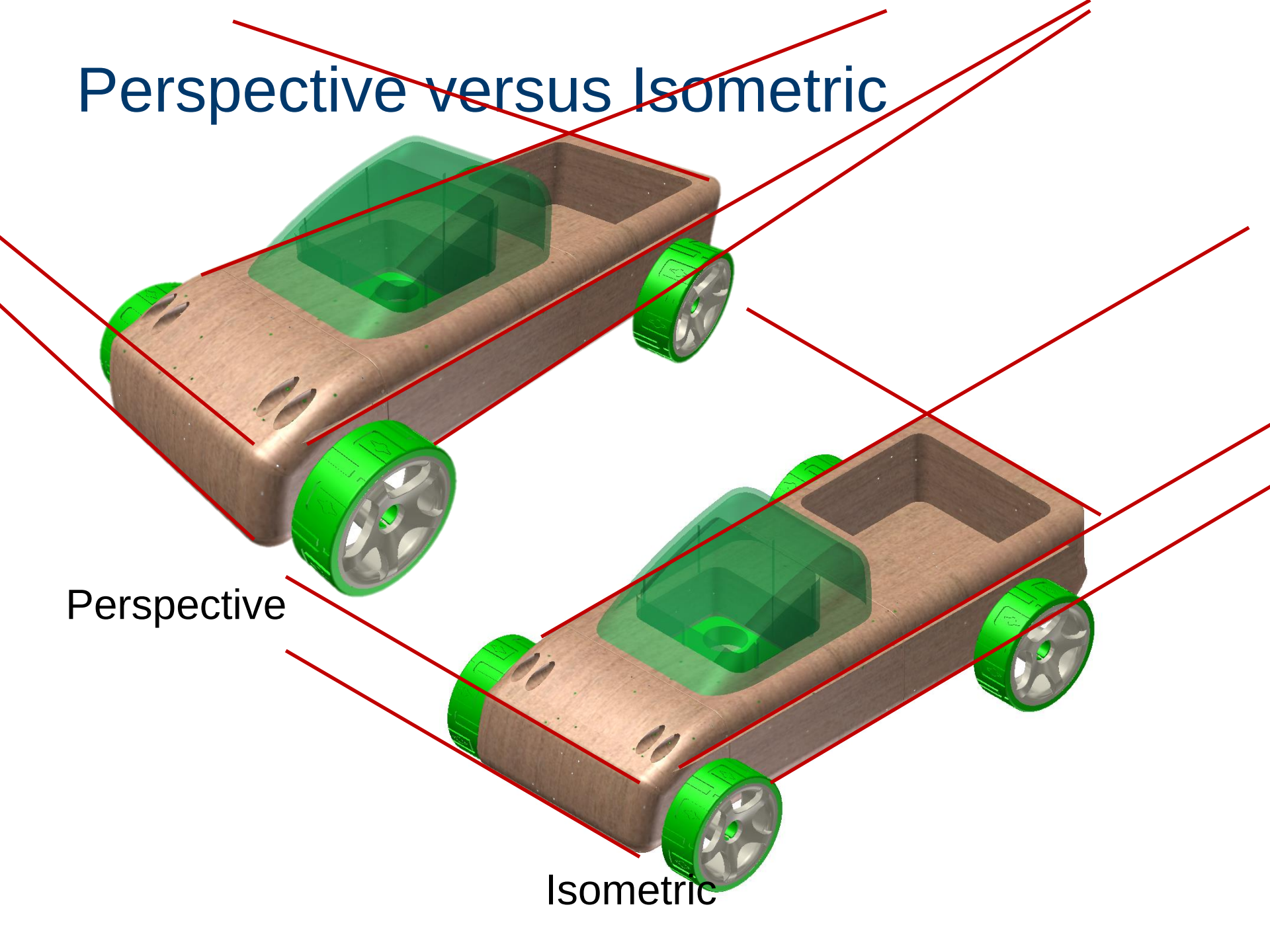
Two-point perspective used in a presentation drawing for a Singer sewing machine handle.

Three-Point Perspective

The ***three-point*** perspective gives the viewer either a worm's-eye, or bird's-eye view of an object.



Three-Point Perspective



Perspective versus Isometric