

MATH 121

(Day 4)

Today's Topics

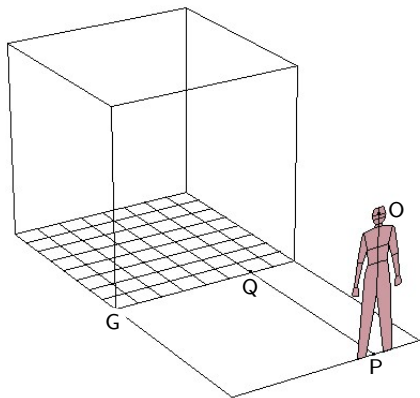
- ▶ Why Alberti's Method works
- ▶ Importance of viewer's distance from picture plane
- ▶ Alberti's diagonal check
- ▶ A variation on Alberti's Method

Richard Hammack:

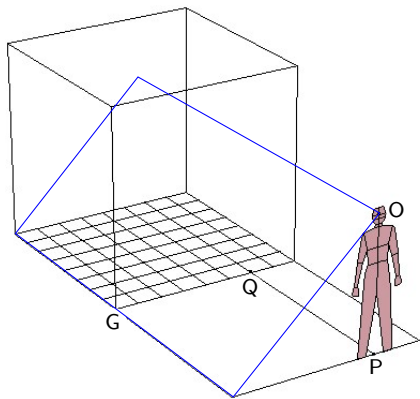
www.people.vcu.edu/~rhammack/Math121/

Topic 1: Why Alberti's Method works

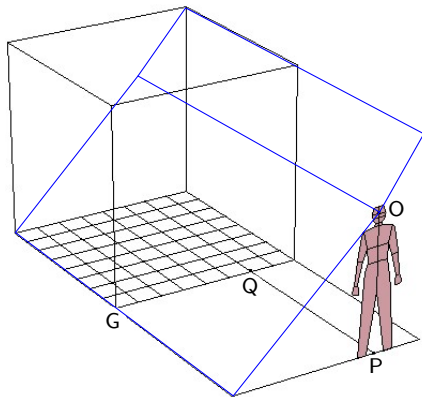
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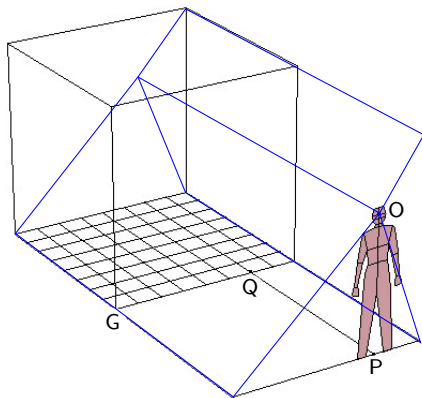
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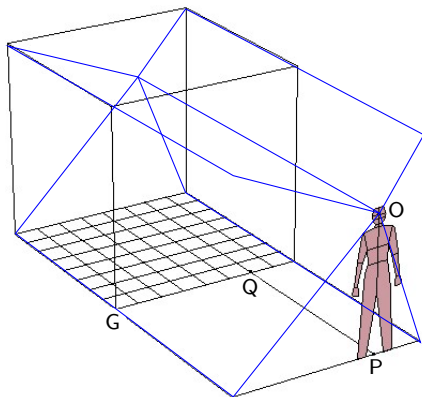
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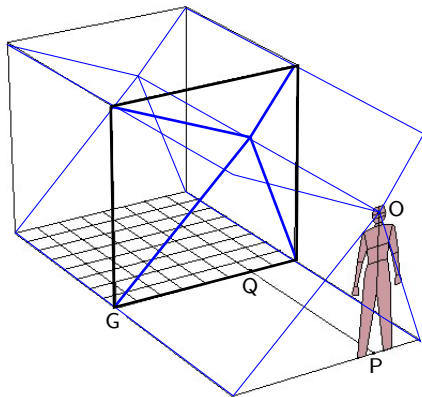
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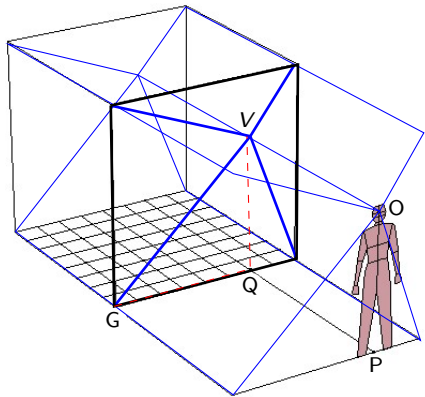
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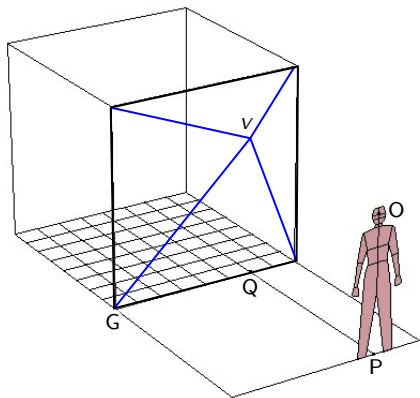
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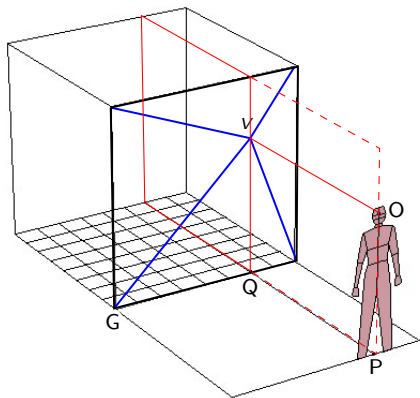
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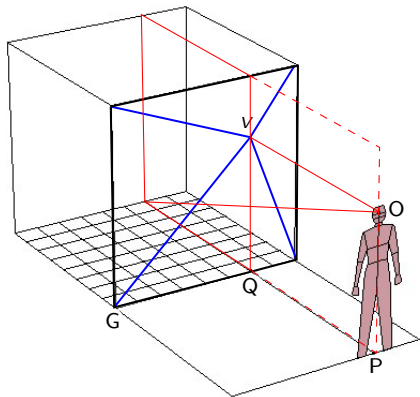
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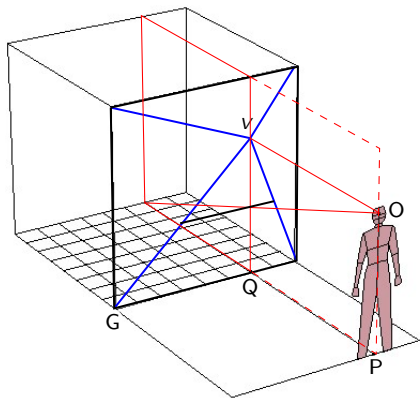
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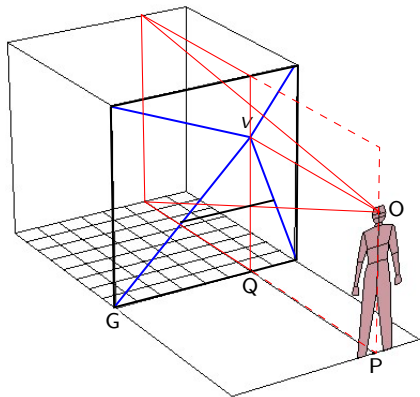
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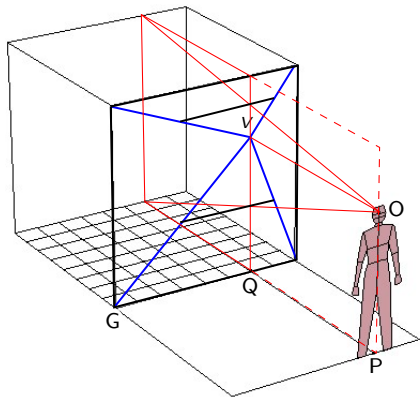
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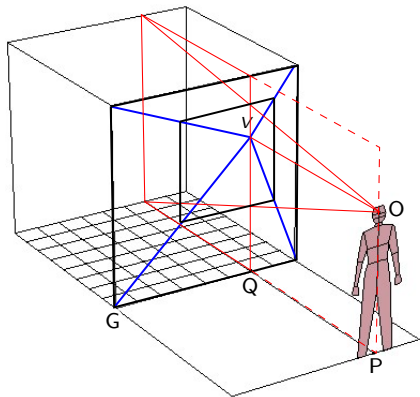
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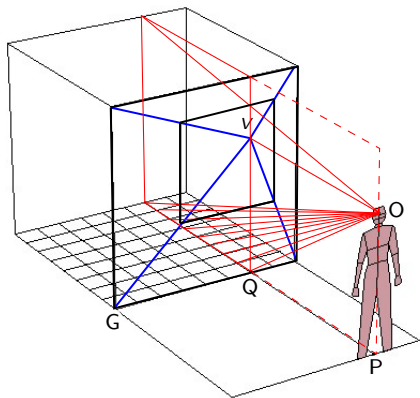
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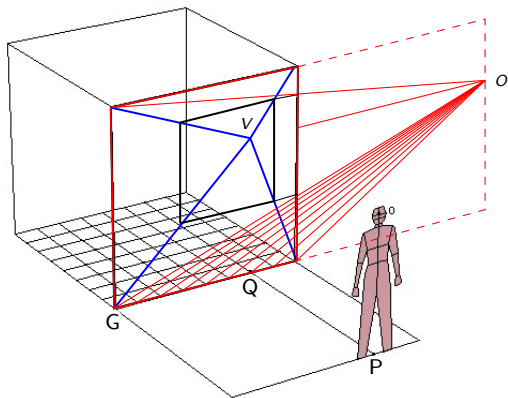
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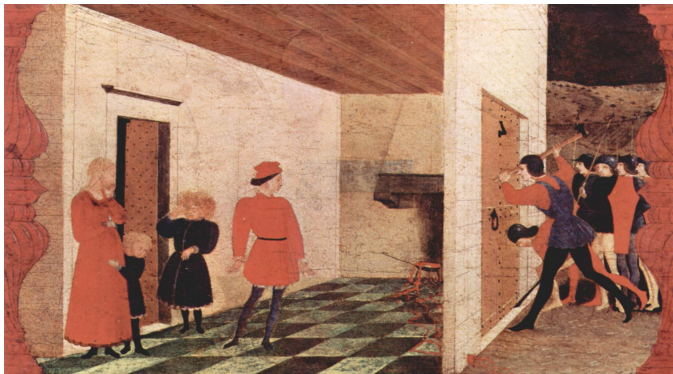


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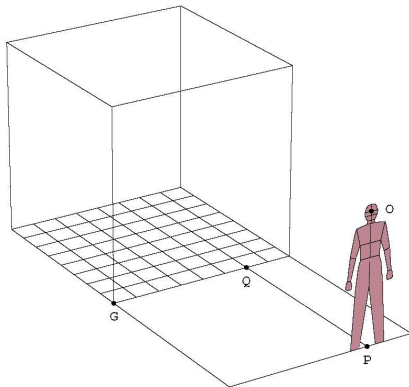
Topic 2: Importance of the viewer's distance QP from the picture plane

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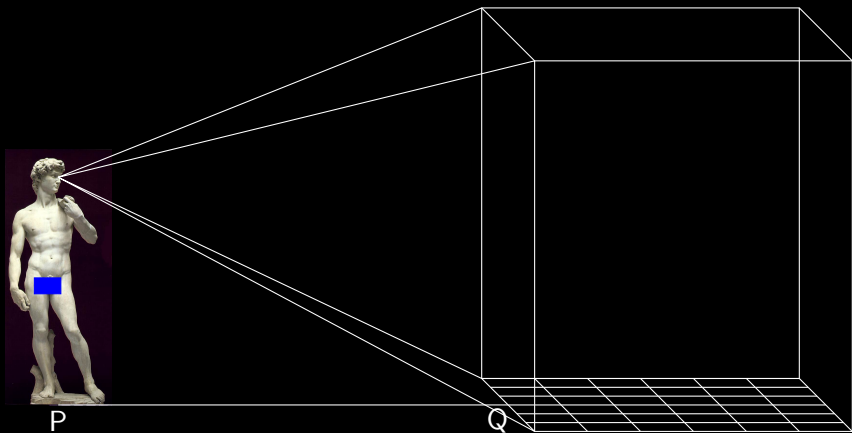
Paolo Uccello, c. 1466, Tempera on wood

From Assignment #2:



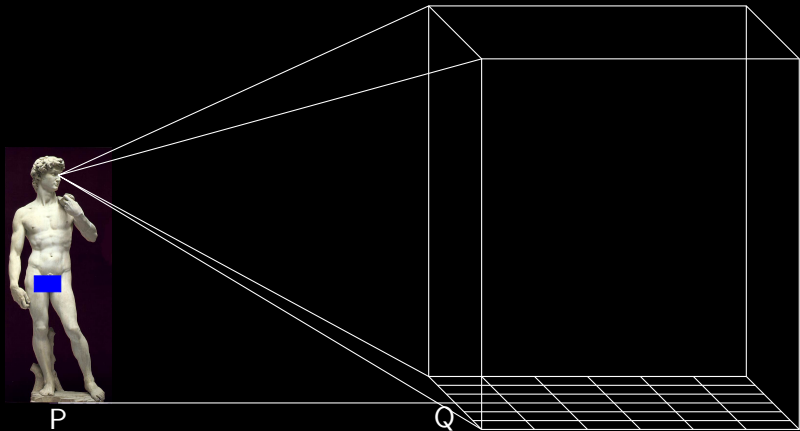
QP is the viewer's distance from the picture plane

The importance of the viewer's distance QP from the picture plane



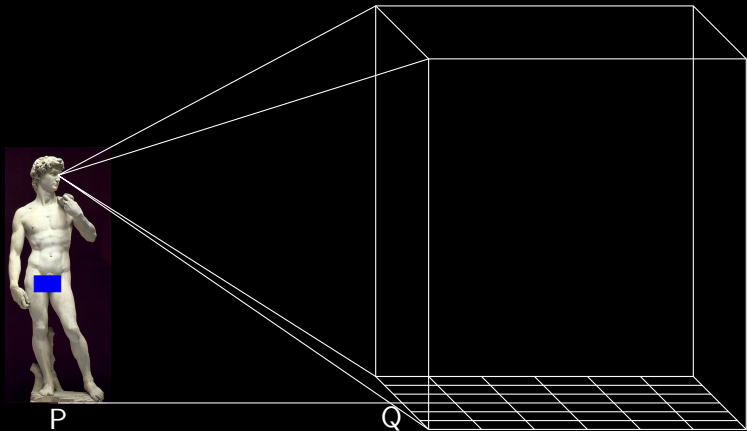
$$QP = 8$$

The importance of the viewer's distance QP from the picture plane



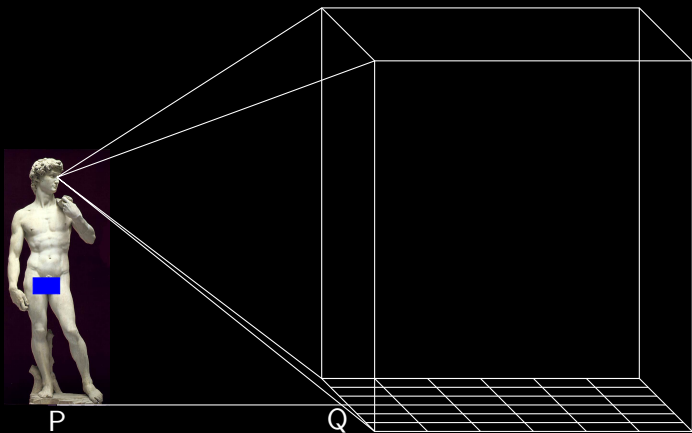
$$QP = 7$$

The importance of the viewer's distance QP from the picture plane



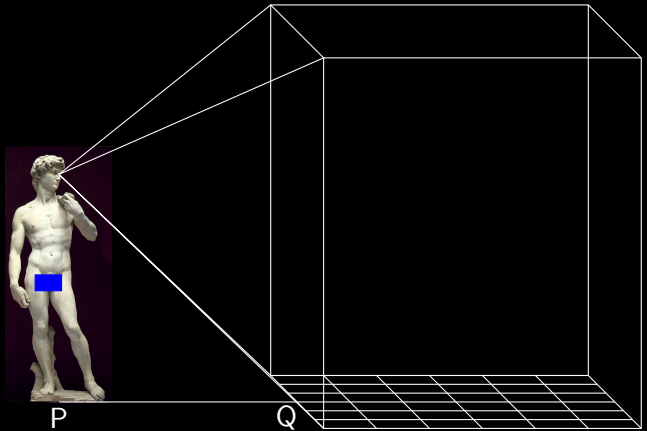
$$QP = 6$$

The importance of the viewer's distance QP from the picture plane



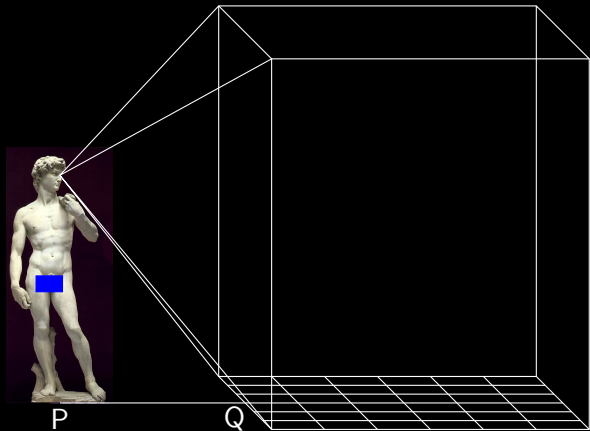
$$QP = 5$$

The importance of the viewer's distance QP from the picture plane



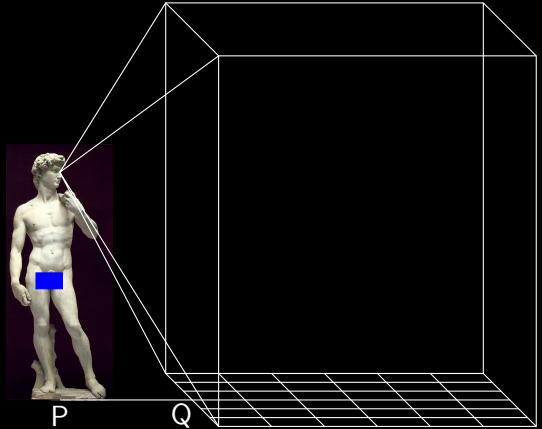
$$QP = 4$$

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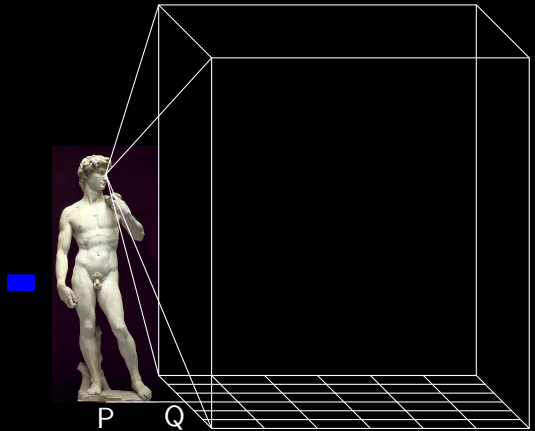
$$QP = 3$$

The importance of the viewer's distance QP from the picture plane



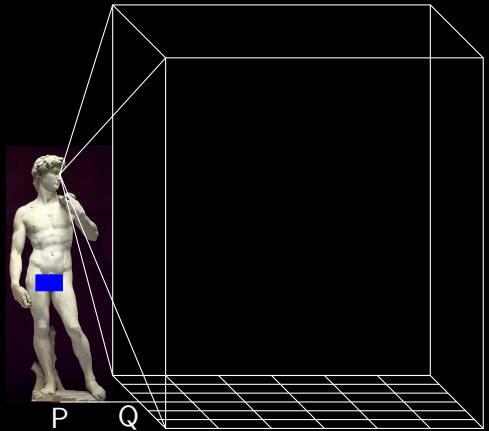
$$QP = 2$$

The importance of the viewer's distance QP from the picture plane



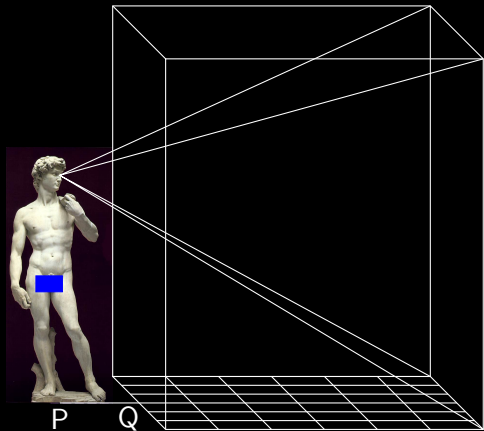
$$QP = 1$$

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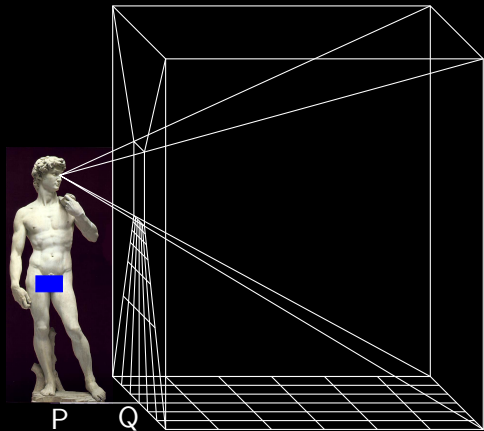
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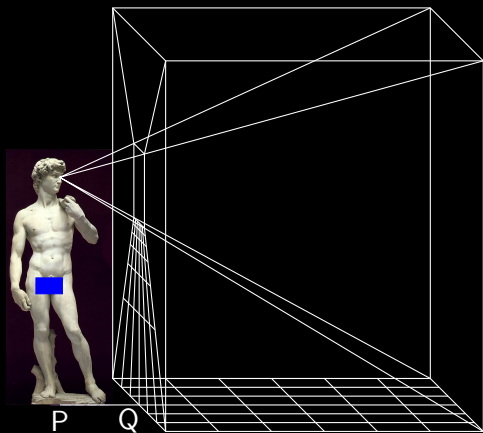
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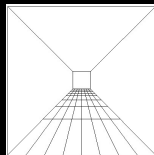


$$QP = 1$$

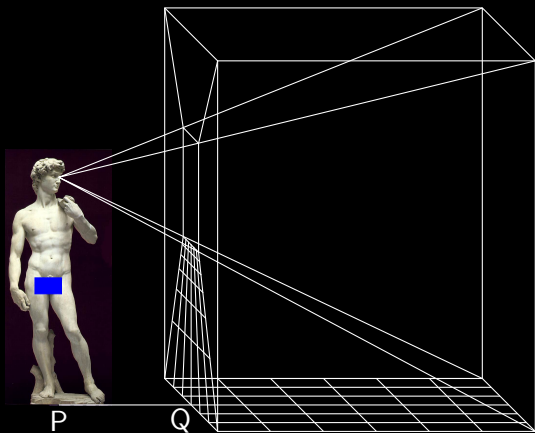
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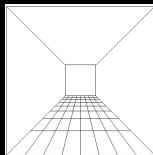
$$QP = 1$$



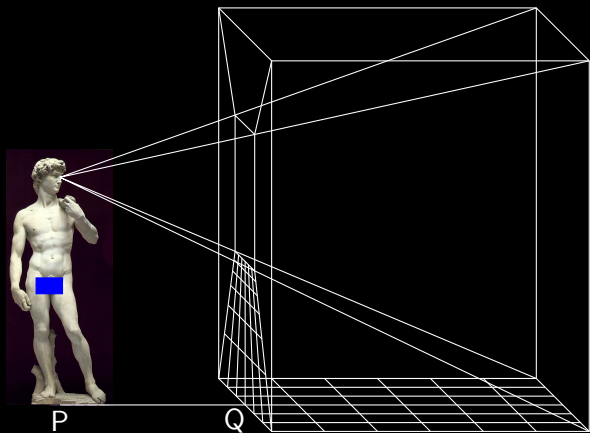
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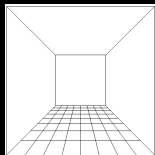
$$QP = 2$$



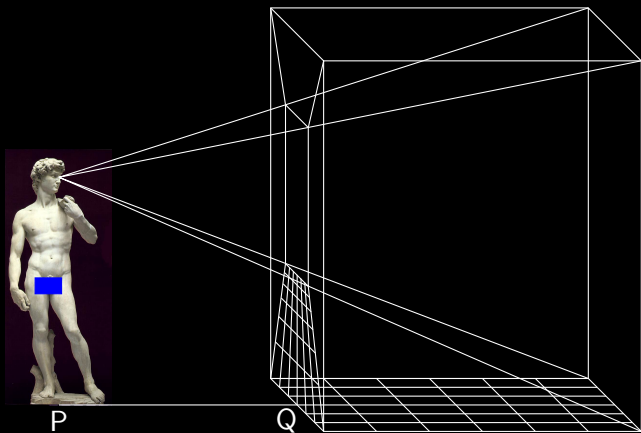
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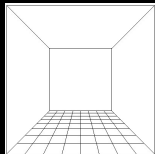
$$QP = 3$$



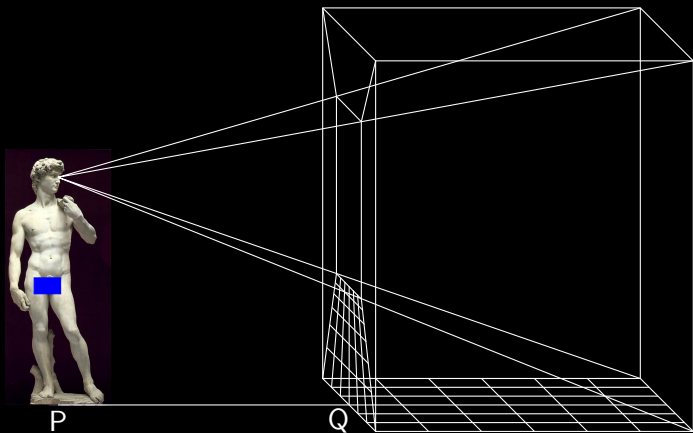
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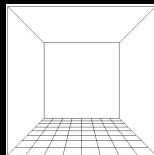
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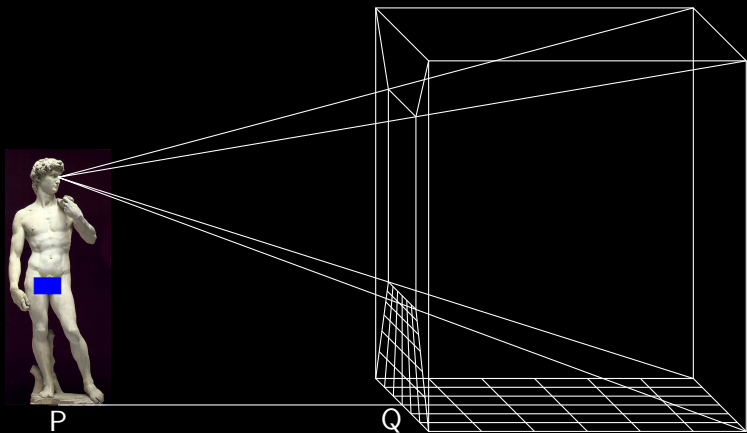
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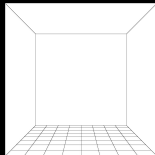
$$QP = 5$$



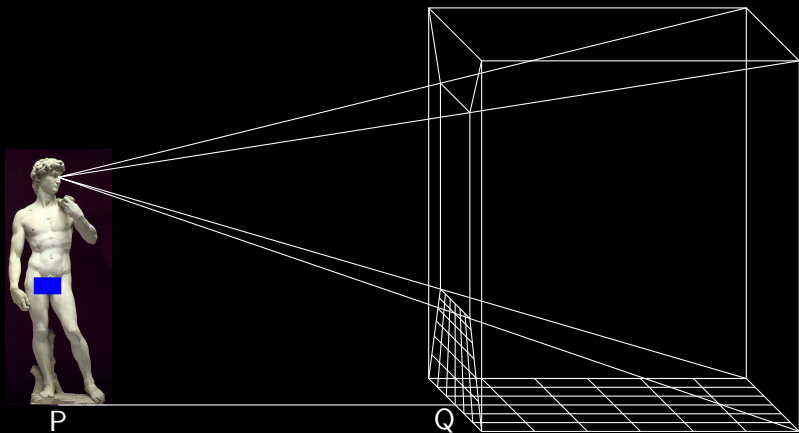
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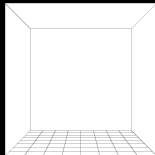
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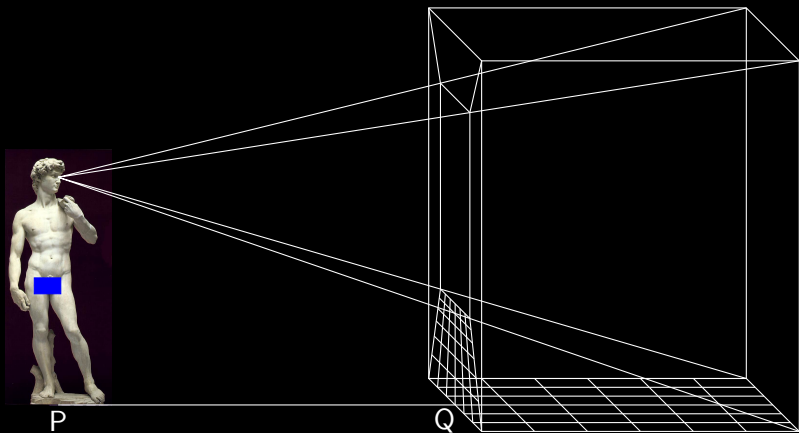
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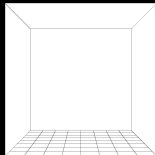
$$QP = 7$$



The importance of the viewer's distance QP from the picture plane



$$QP = 7$$



Rough rule of thumb:

Viewer's distance QP from picture plane should not be shorter than the diagonal of the picture plane.

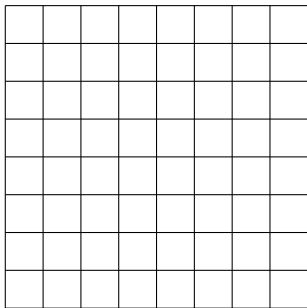
Topic 3: Alberti's Diagonal Check

(To check the accuracy of a drawing of a **square** tiled floor.)

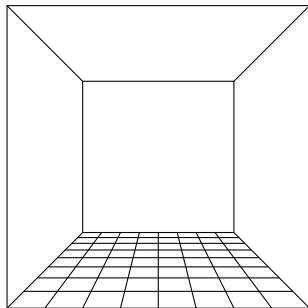
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Top view



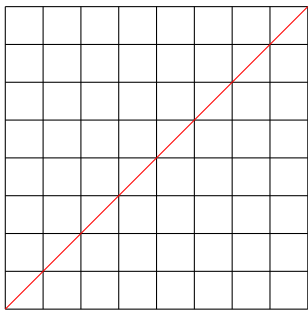
Perspective view



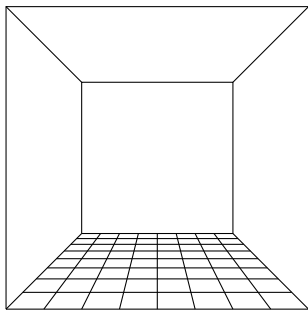
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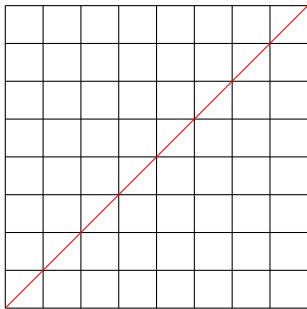
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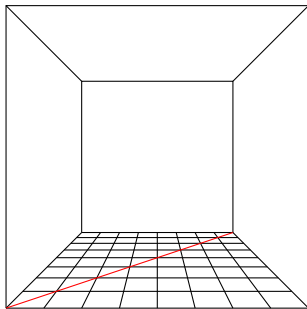
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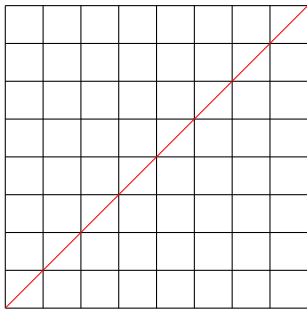
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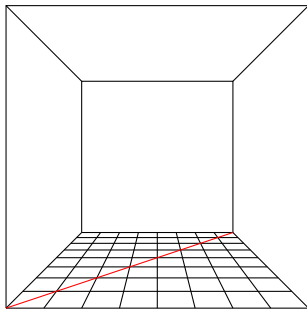
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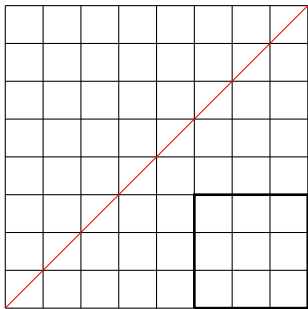


To check that a perspective drawing of a square tiled region is correct, draw a diagonal from one corner to the other. It should cross the tiles at corners.

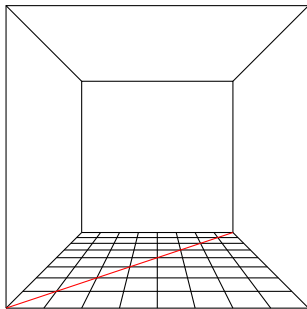
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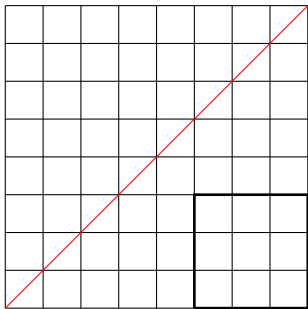


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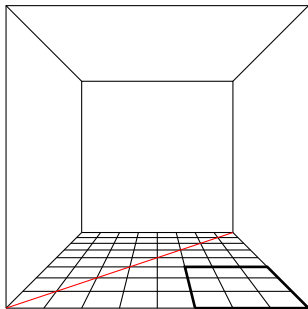
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Perspective view

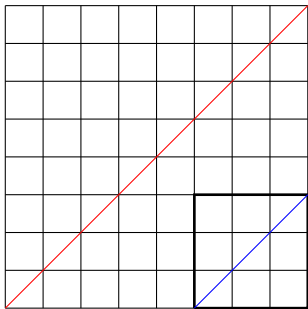


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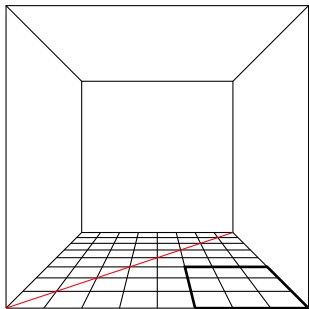
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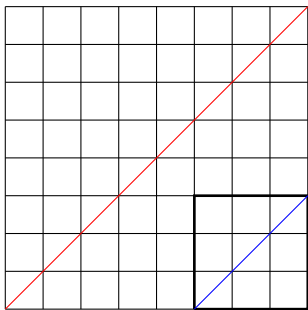


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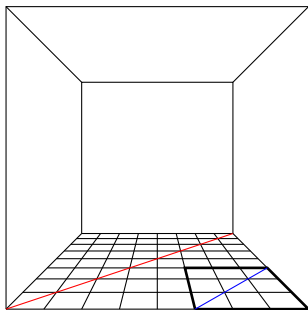
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Perspective view



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Perspective circa 1490



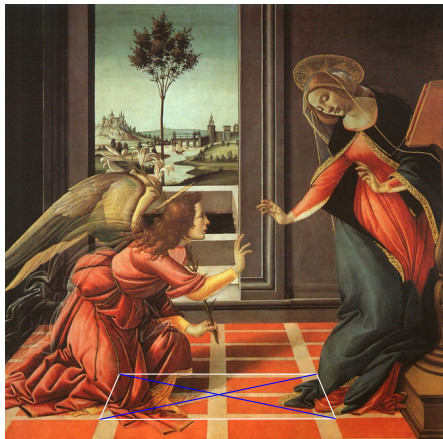
Perspective circa 1490



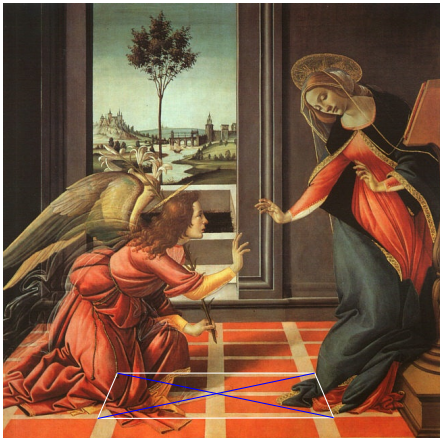
Perspective circa 1490



Perspective circa 1490



Perspective circa 1490



Perspective circa 2014



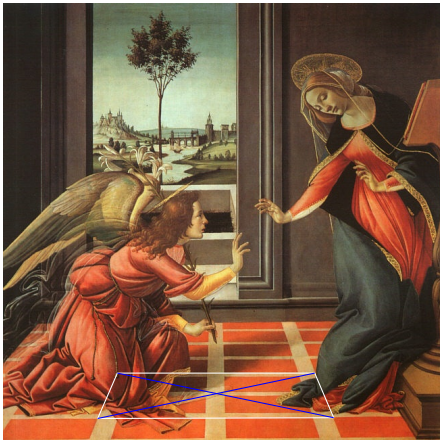
Perspective circa 1490



Perspective circa 2014



Perspective circa 1490



Perspective circa 2014



Perspective circa 1490

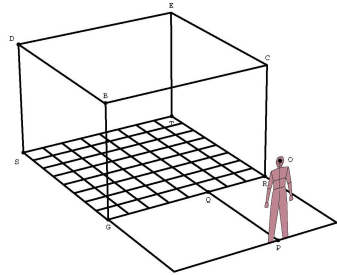


Perspective circa 2014



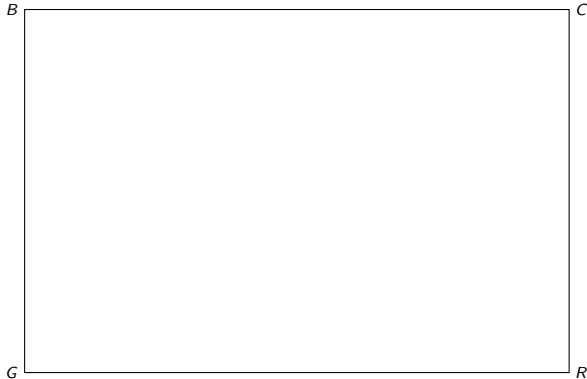
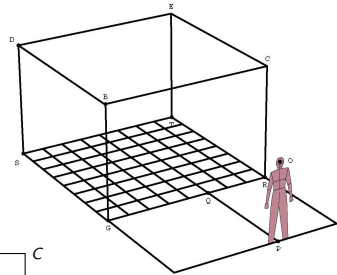
Topic 4: A variation on Alberti's Method

Viewer looks into a room with a **square** floor.
How to draw what the viewer sees:



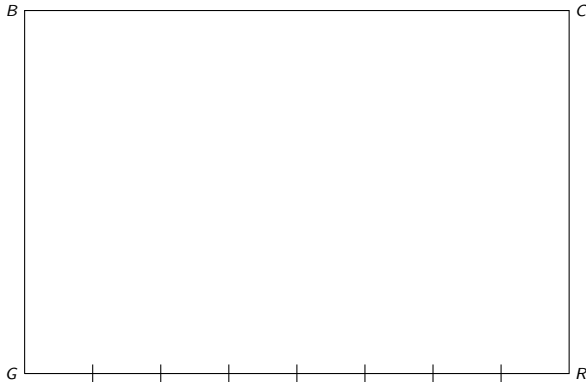
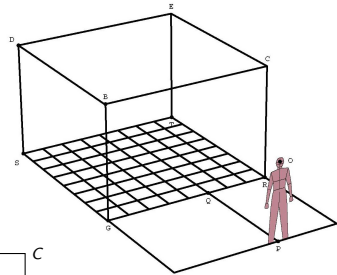
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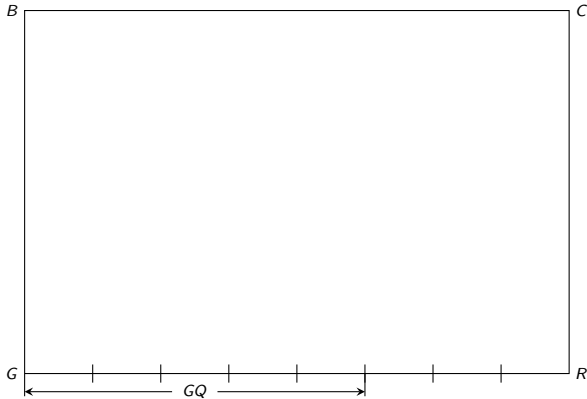
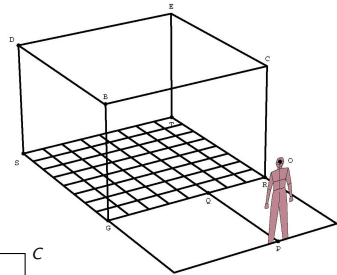
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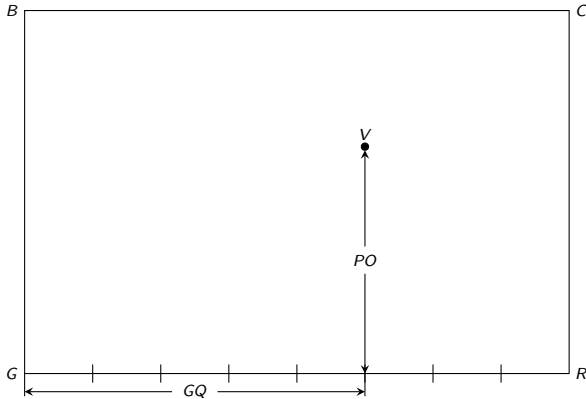
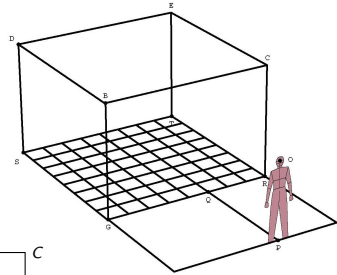
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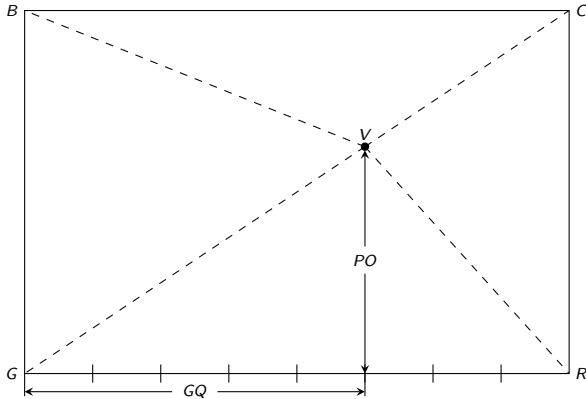
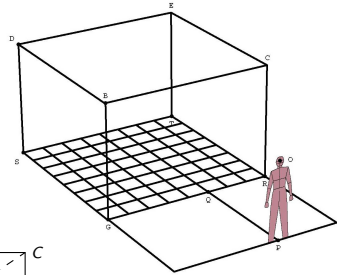
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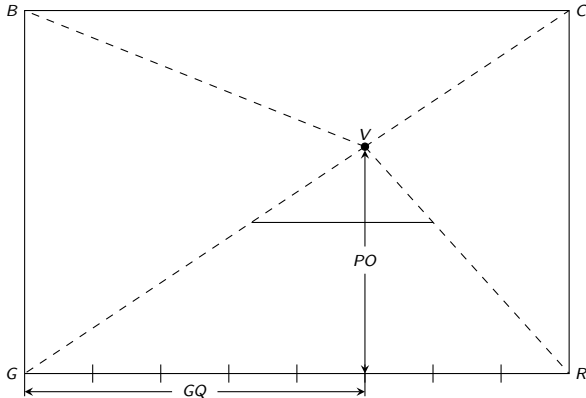
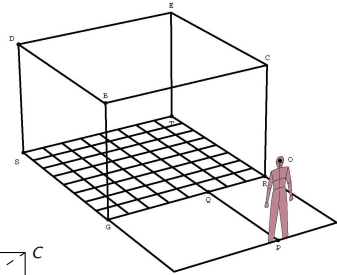
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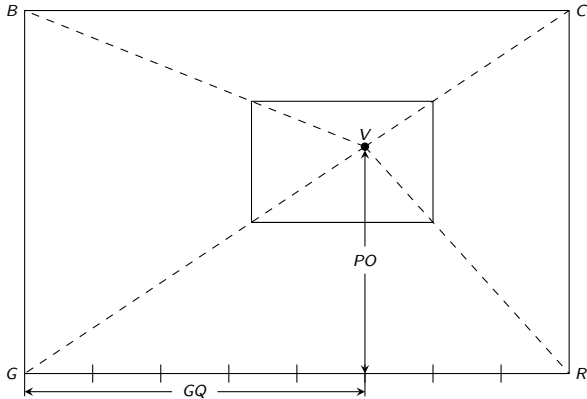
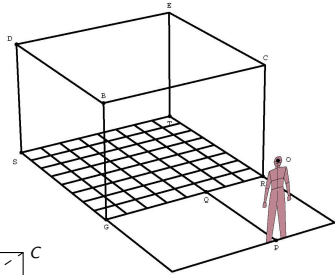
Topic 4: A variation on Alberti's Method

Viewer looks into a room with a **square** floor.
How to draw what the viewer sees:



Topic 4: A variation on Alberti's Method

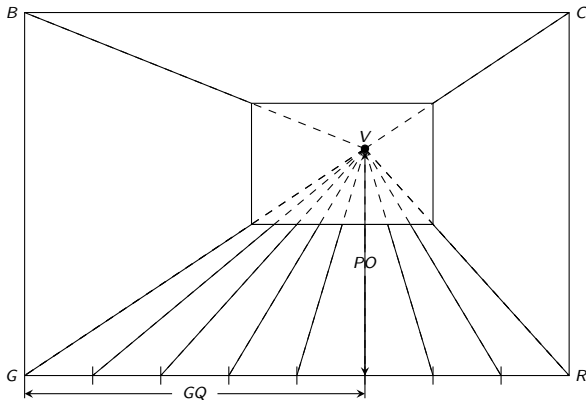
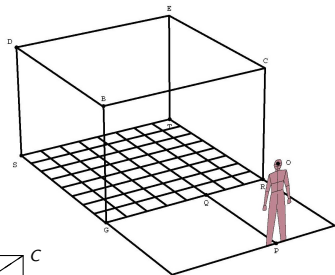
Viewer looks into a room with a **square** floor.
How to draw what the viewer sees:



Topic 4:

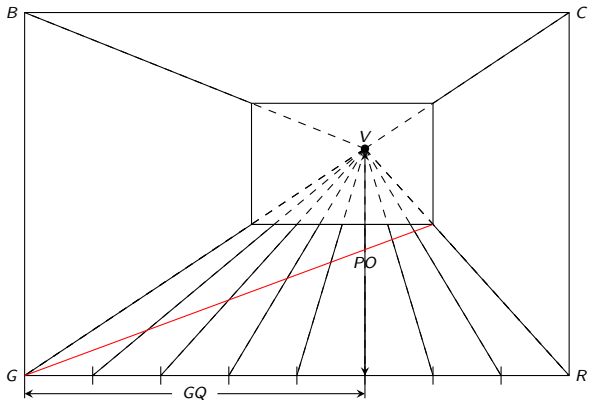
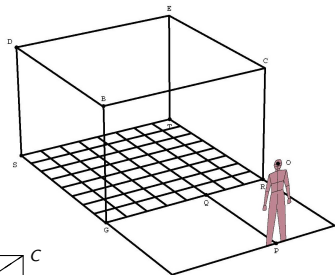
A variation on Alberti's Method

Viewer looks into a room with a **square** floor.
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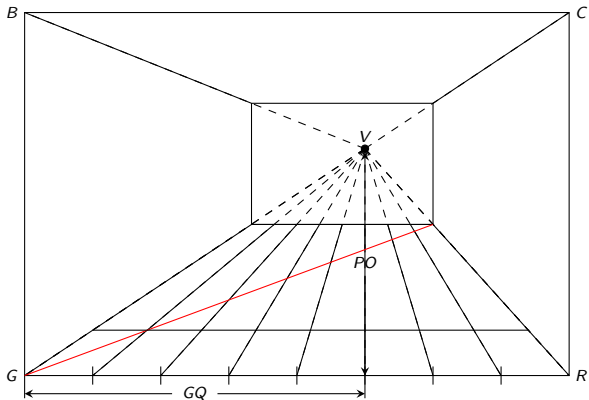
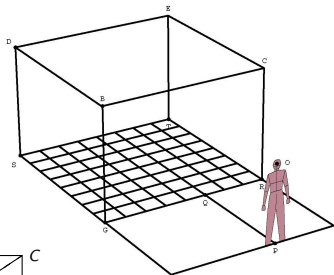
Topic 4: A variation on Alberti's Method

Viewer looks into a room with a **square** floor.
How to draw what the viewer sees:



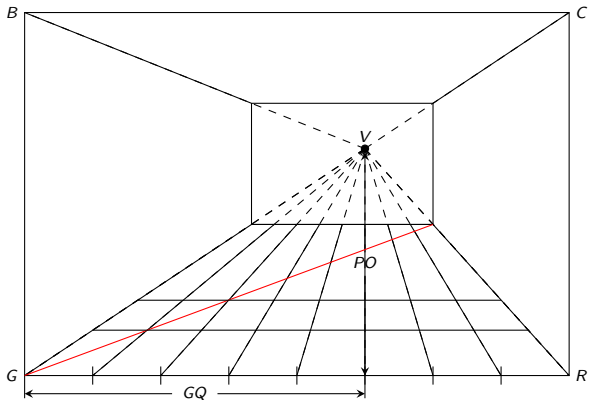
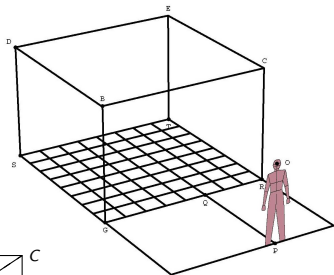
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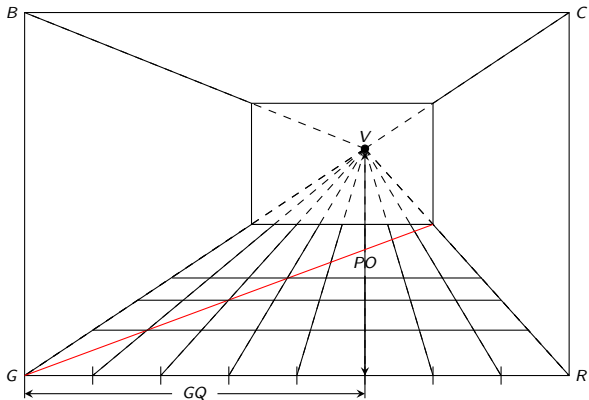
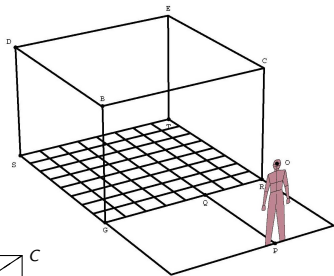
Topic 4: A variation on Alberti's Method

Viewer looks into a room with a **square** floor.
How to draw what the viewer sees:



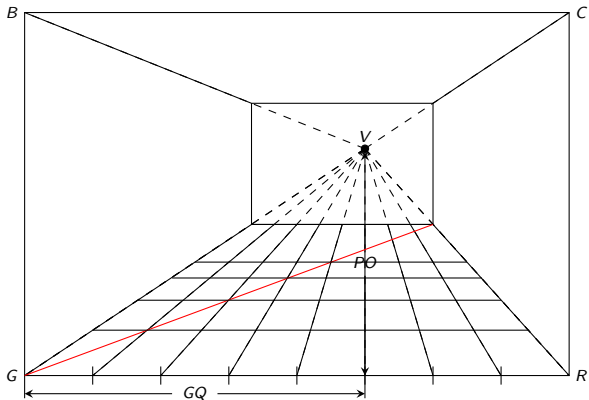
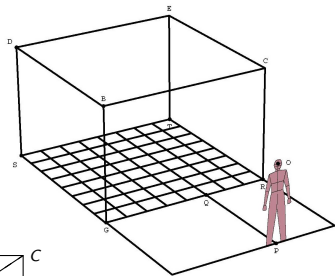
Topic 4: A variation on Alberti's Method

Viewer looks into a room with a **square** floor.
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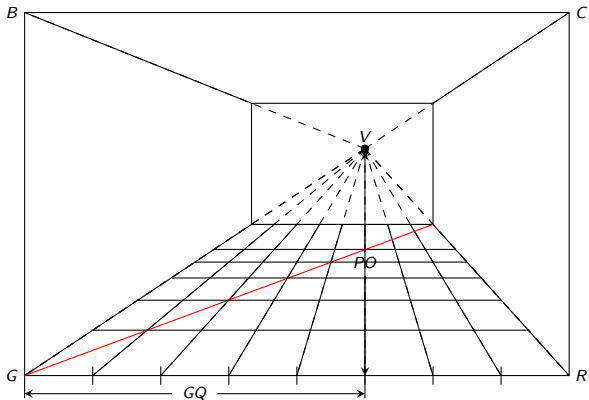
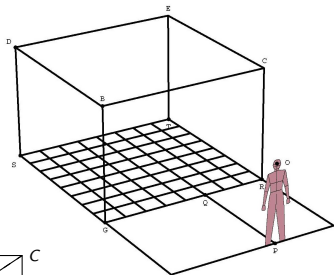
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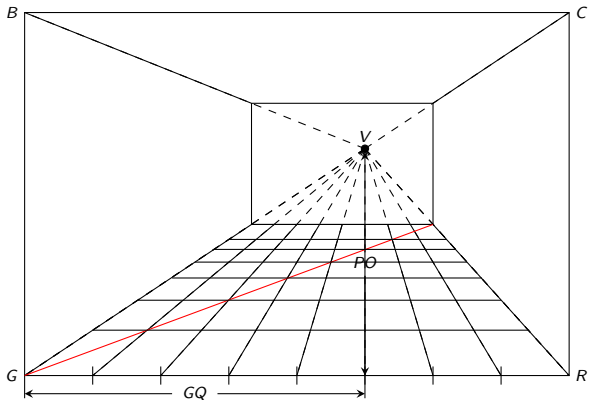
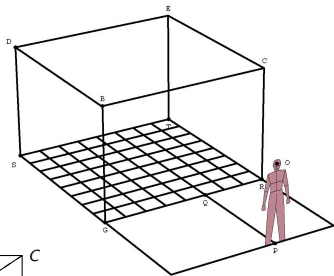
Topic 4: A variation on Alberti's Method

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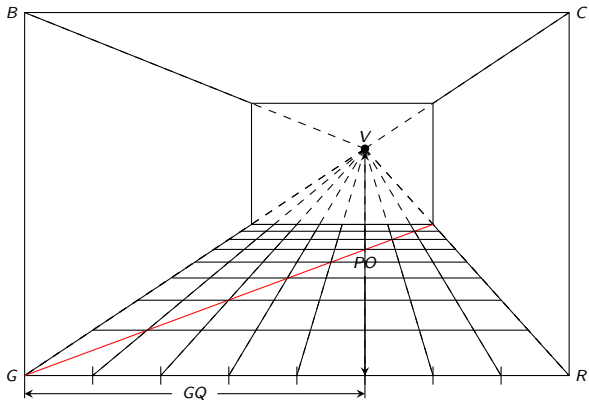
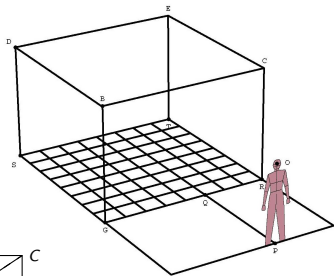
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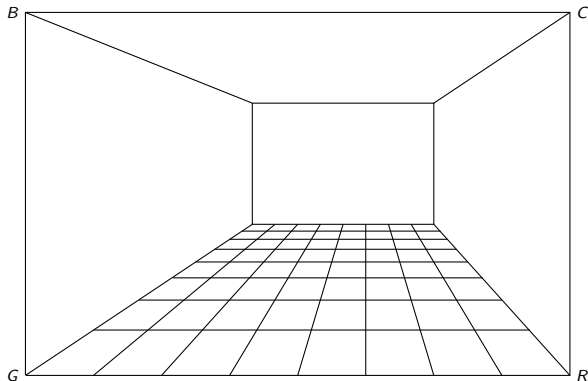
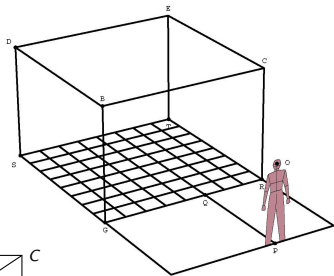
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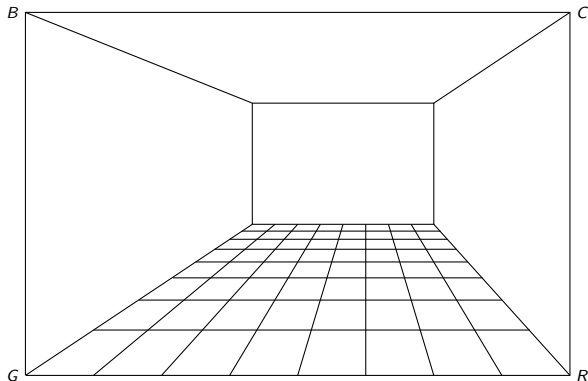
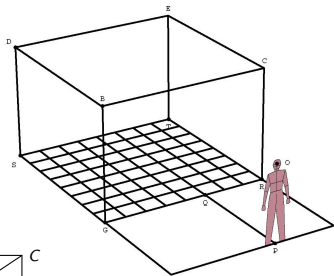
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Assignment #3