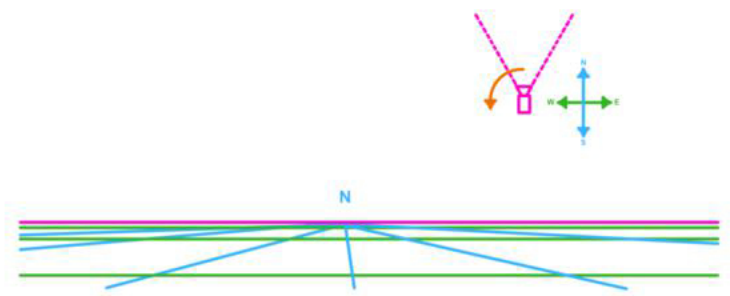
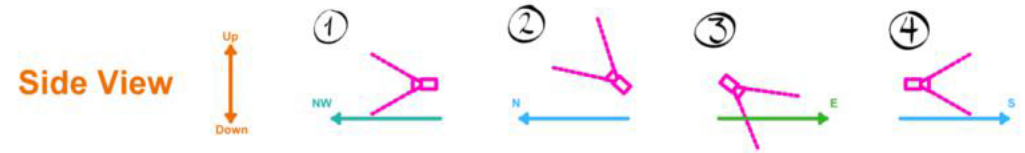
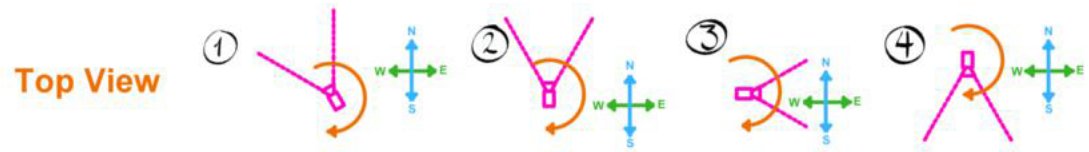
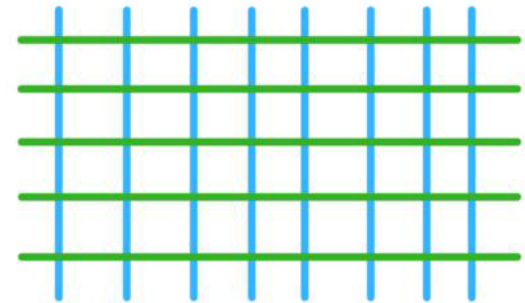
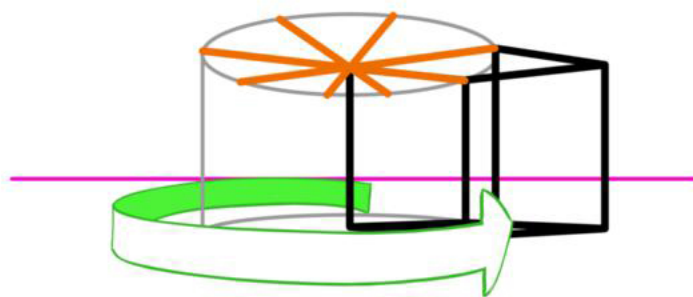
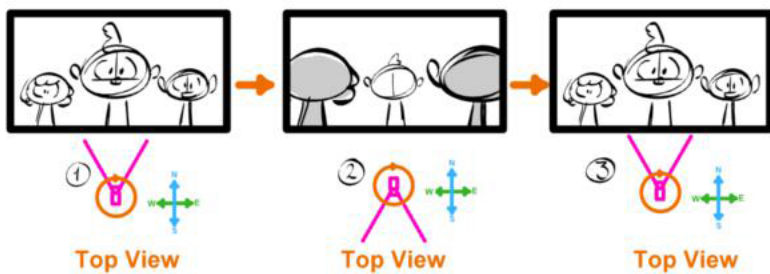


Perspective Exercises

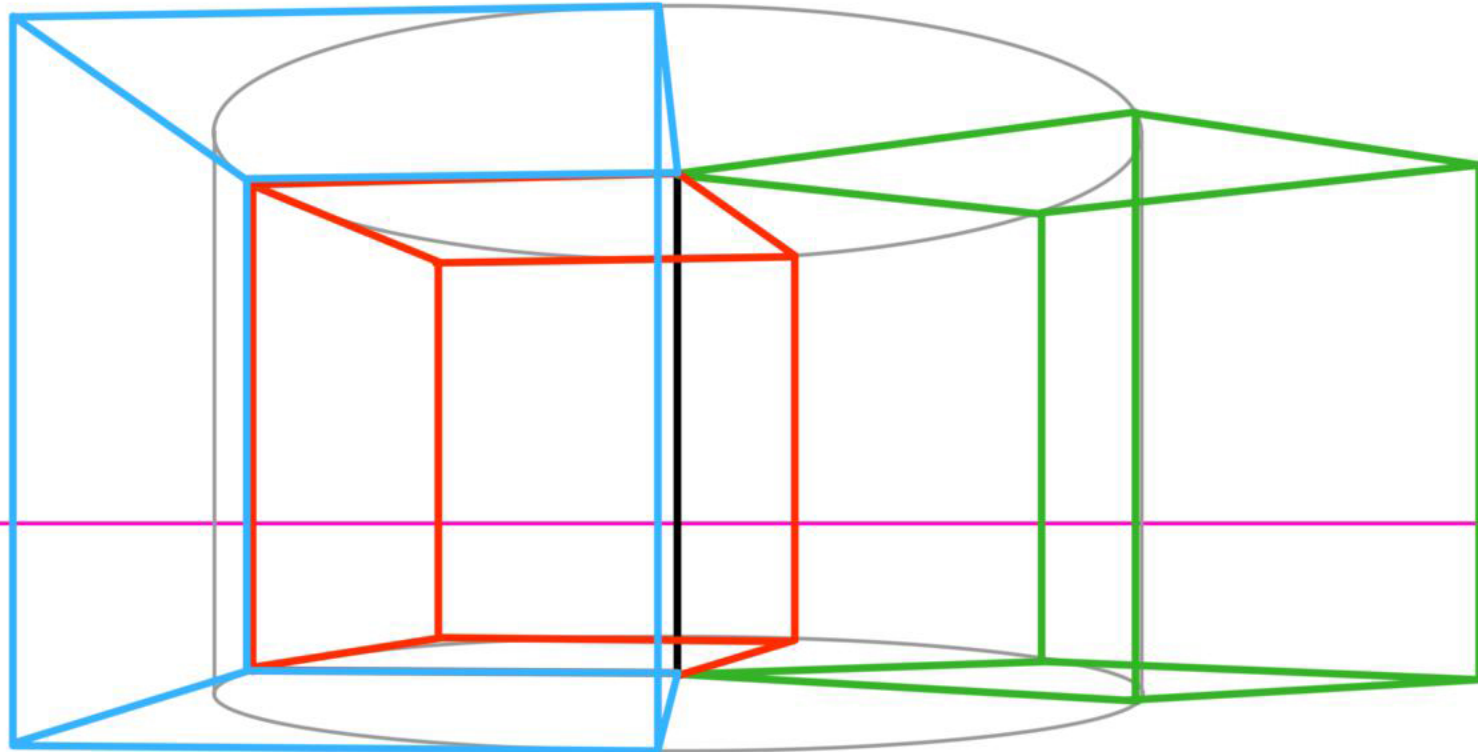
by Magnus Kravik



Exercise 1: Rotating a cube.

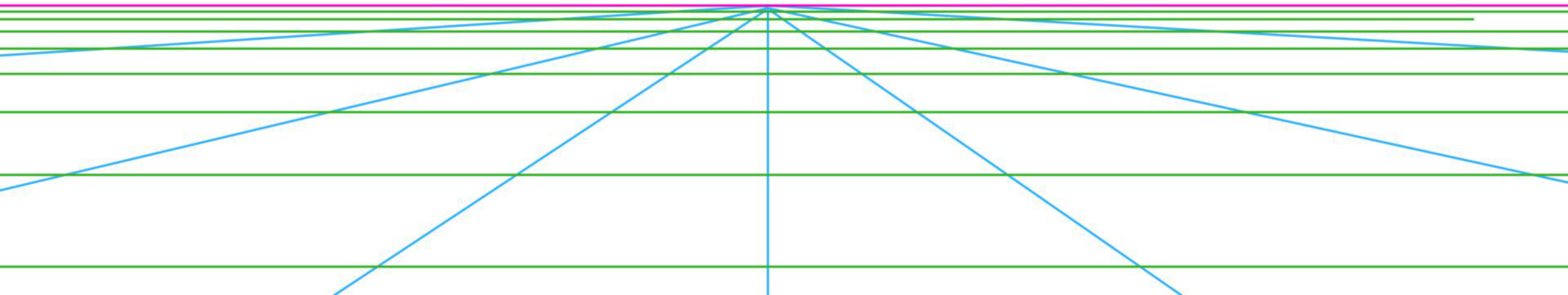
This is an exercise I learned from *PERSPECTIVE 5: Rotation and Camera Lenses* by ModernDayJames on Youtube. Check him out for a lot of good perspective and drawing tips!

The point here is to get a better understanding about where you put the vanishing point(s), it is NOT about drawing perfect cubes or having a smooth animation - that doesn't matter now. Learn about the vanishing point! I'm doing the first part of the exercise step by step to set it up.

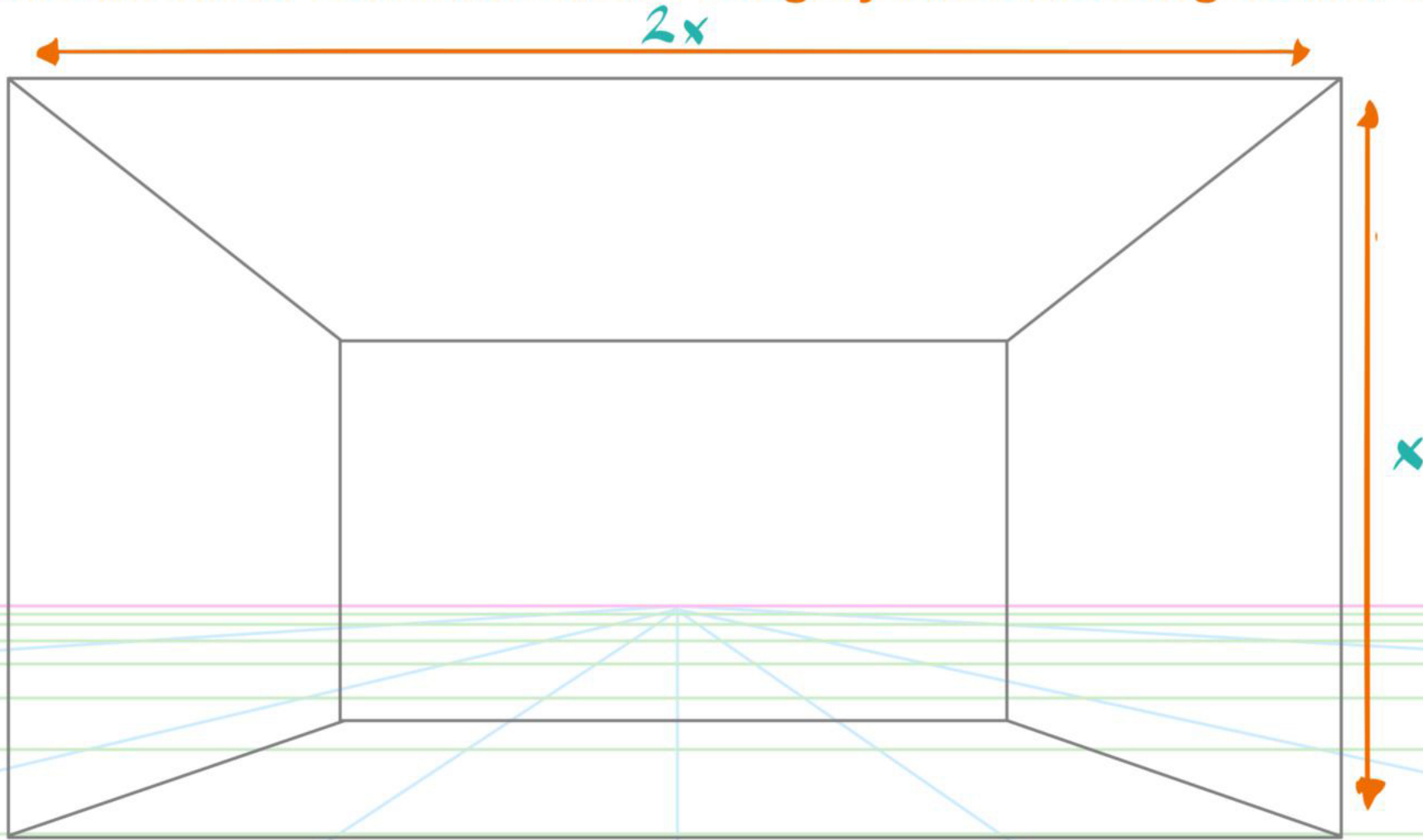


Create a 1 point perspective.

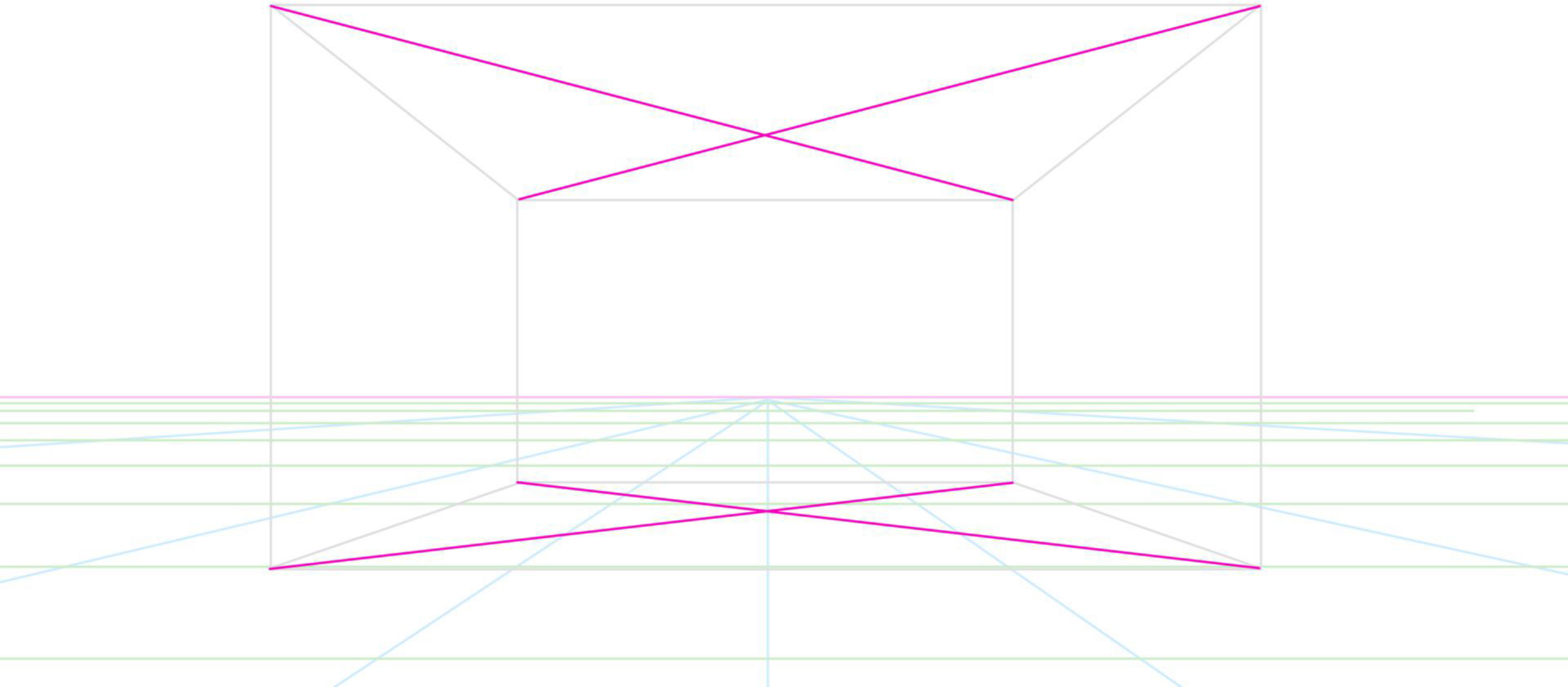
Keep the **Horizon Line** on a separate layer. It will make it easier when you are turning the cube.



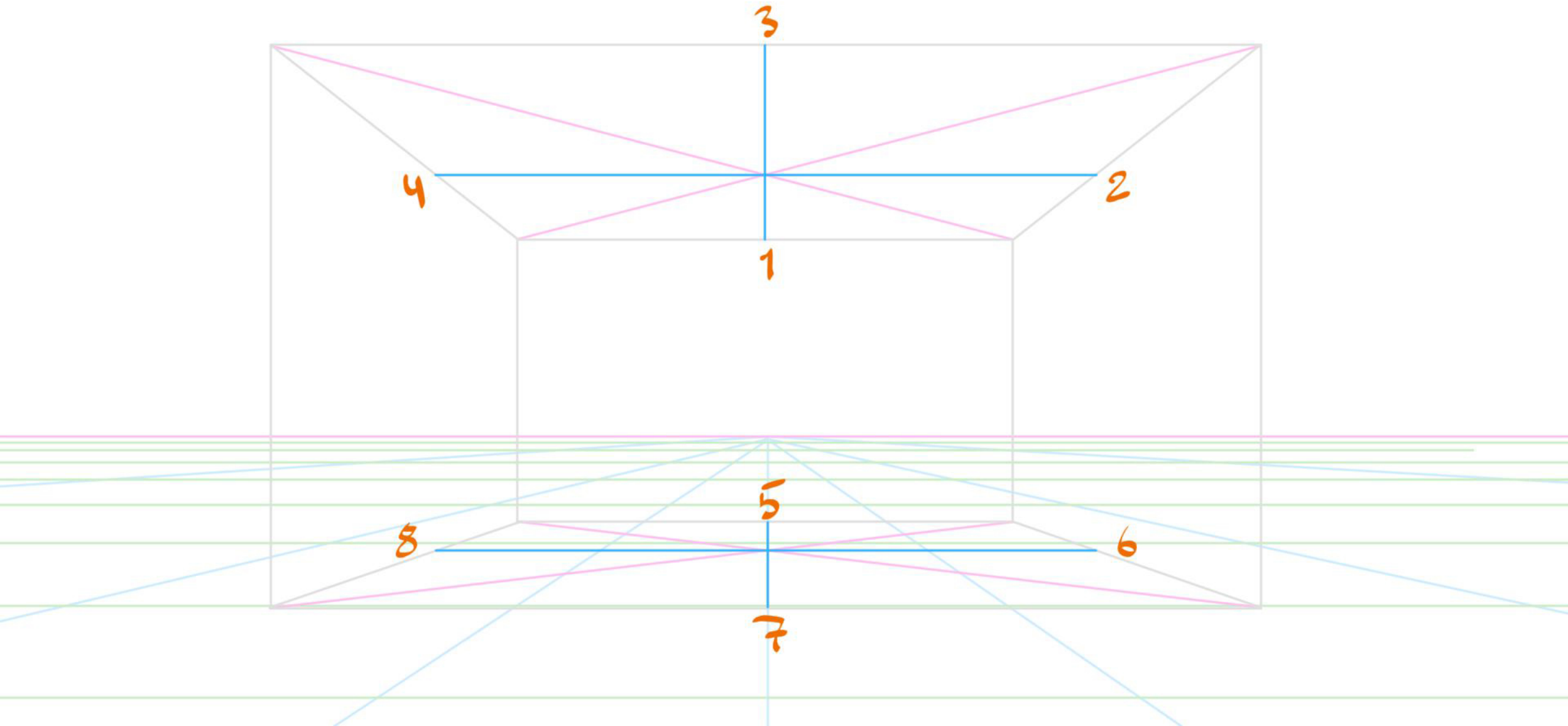
**Make a box with the vanishing point roughly in its center.
I would recommend to make the width roughly twice as long as the height.**



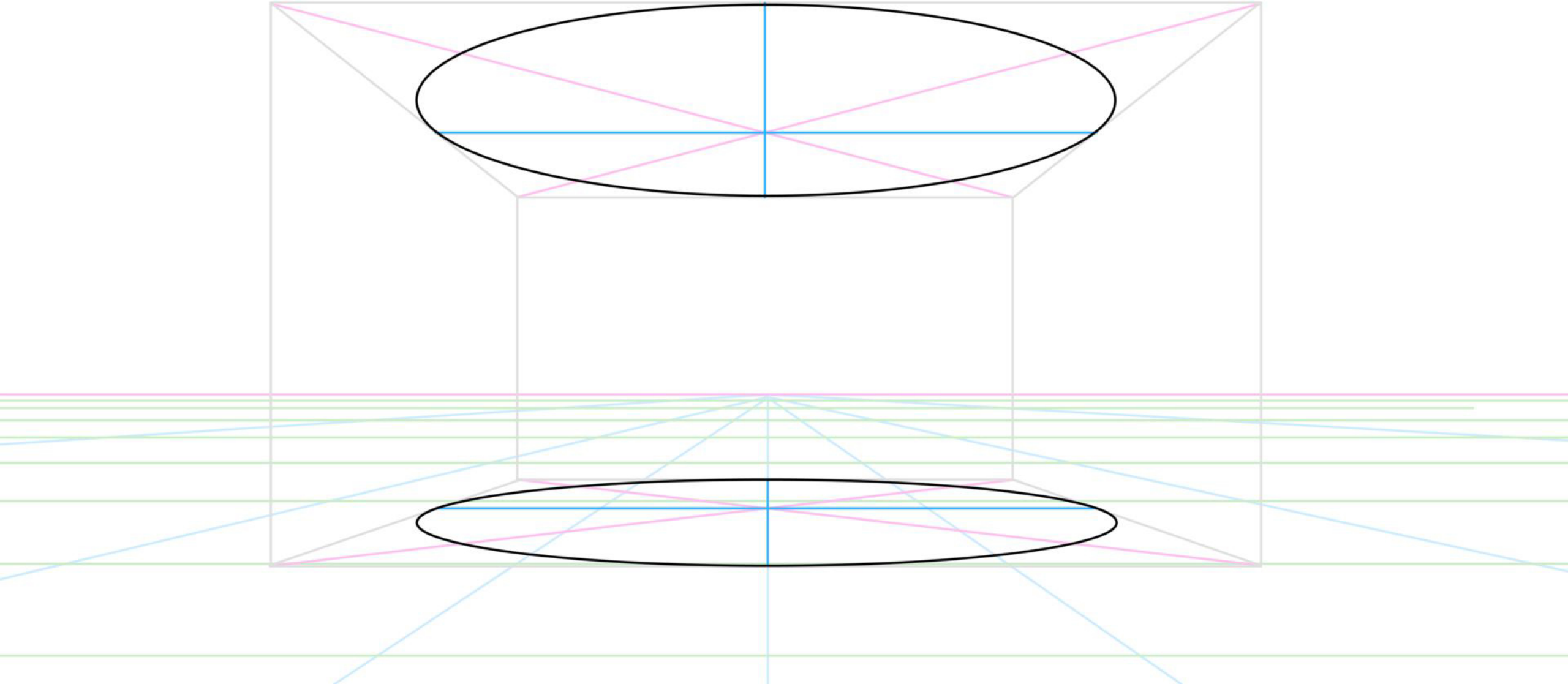
Find the center of the top and bottom square.



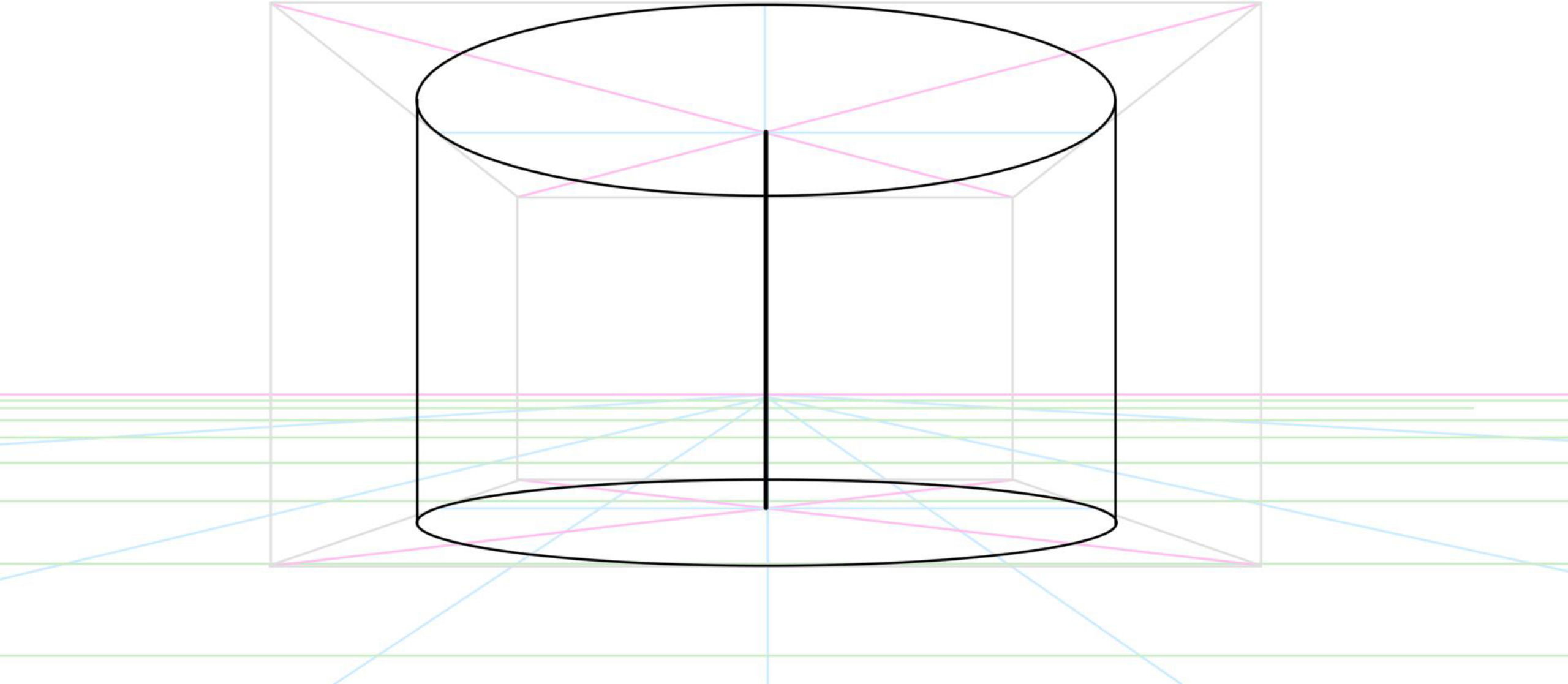
Find the middle of the 4 sides of each of those 2 squares.



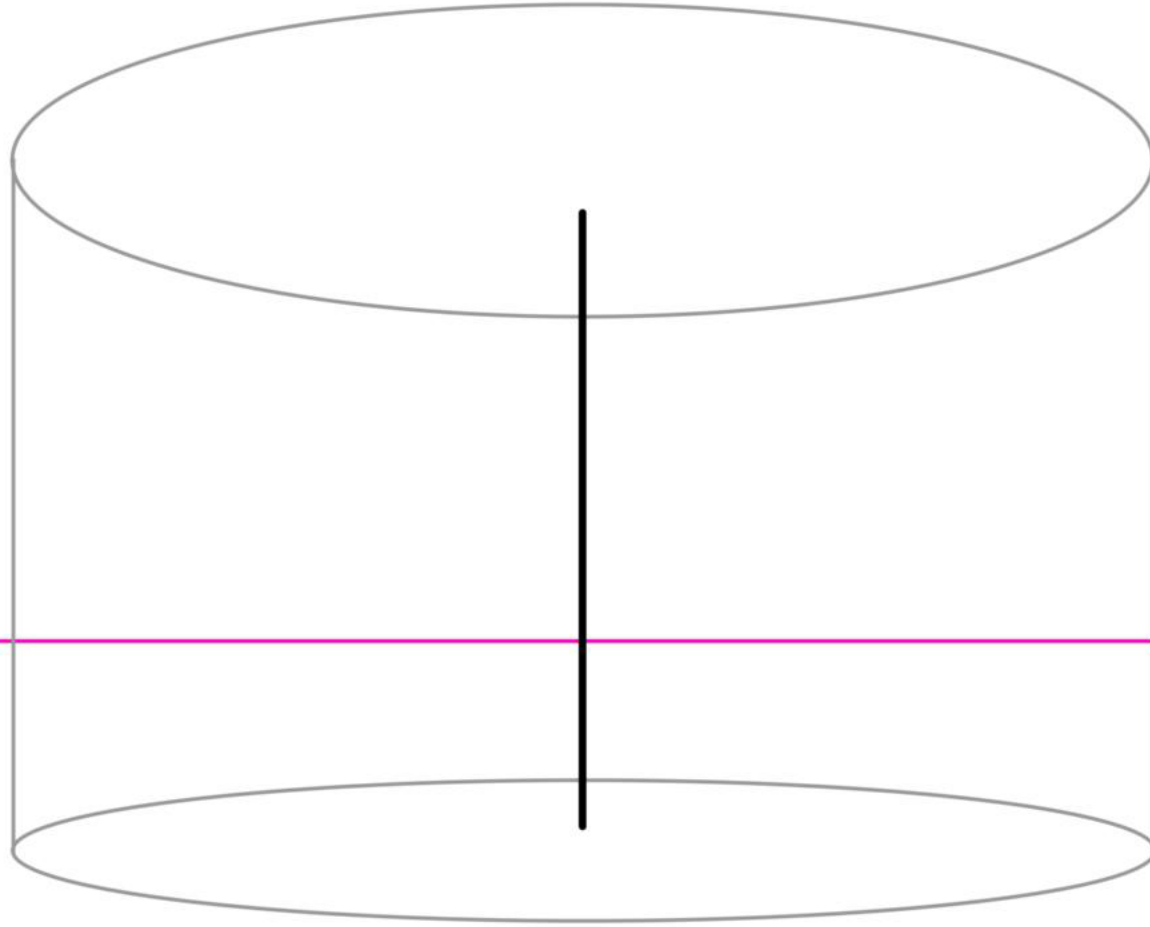
Make a circle that fits within those squares, touch the middle point of the sides.



Add the verticle lines to finish the cylinder and add a Center Line in the Cylinder.

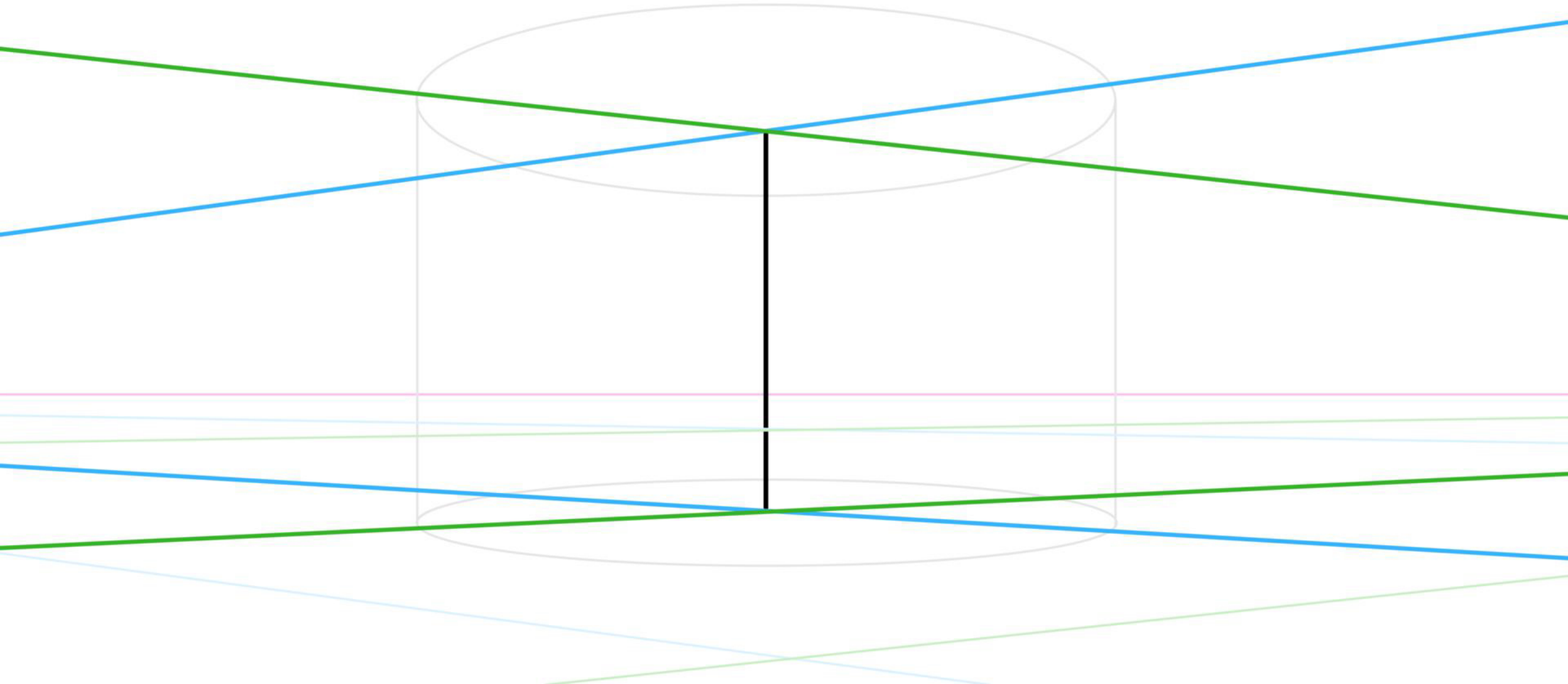


Hide everything except the Cylinder, The Horizon Line and the Center Line.

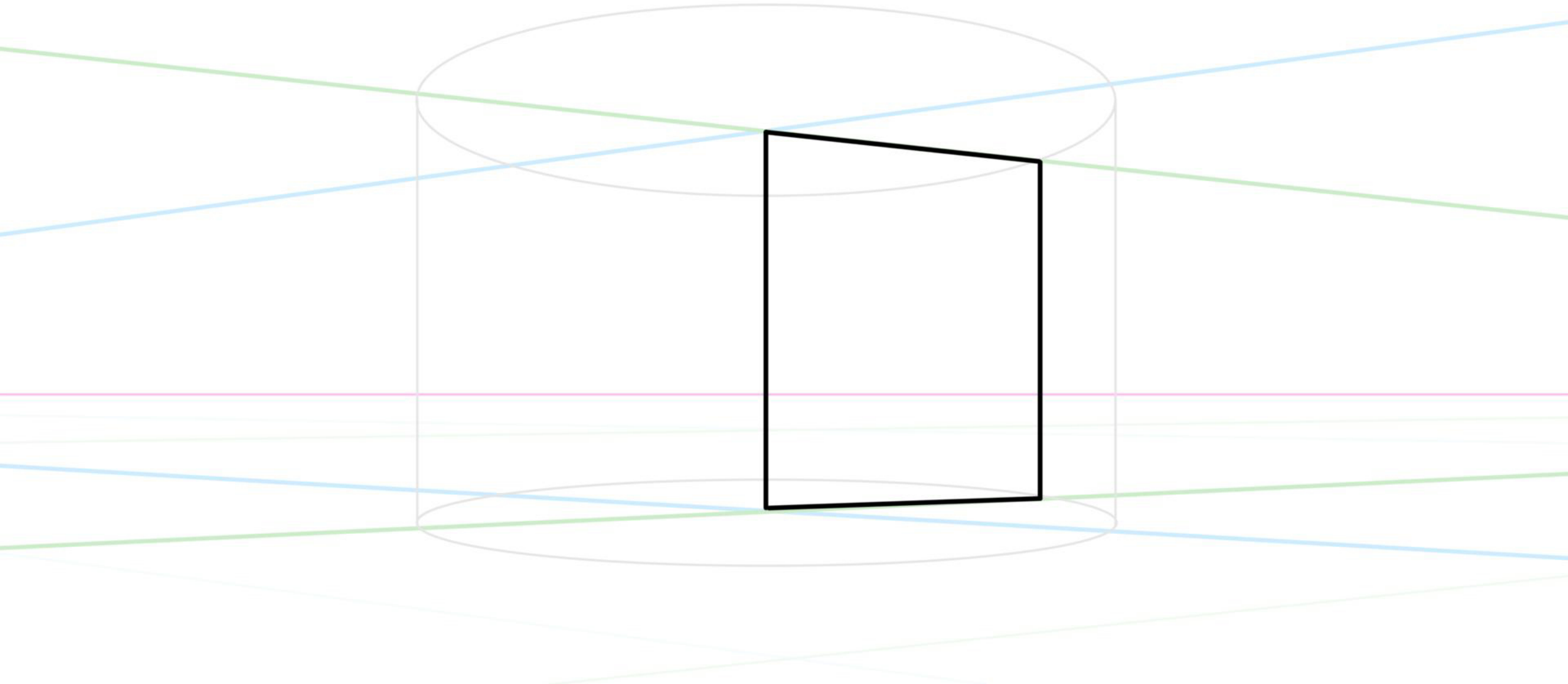


Draw a new 2 point perspective.

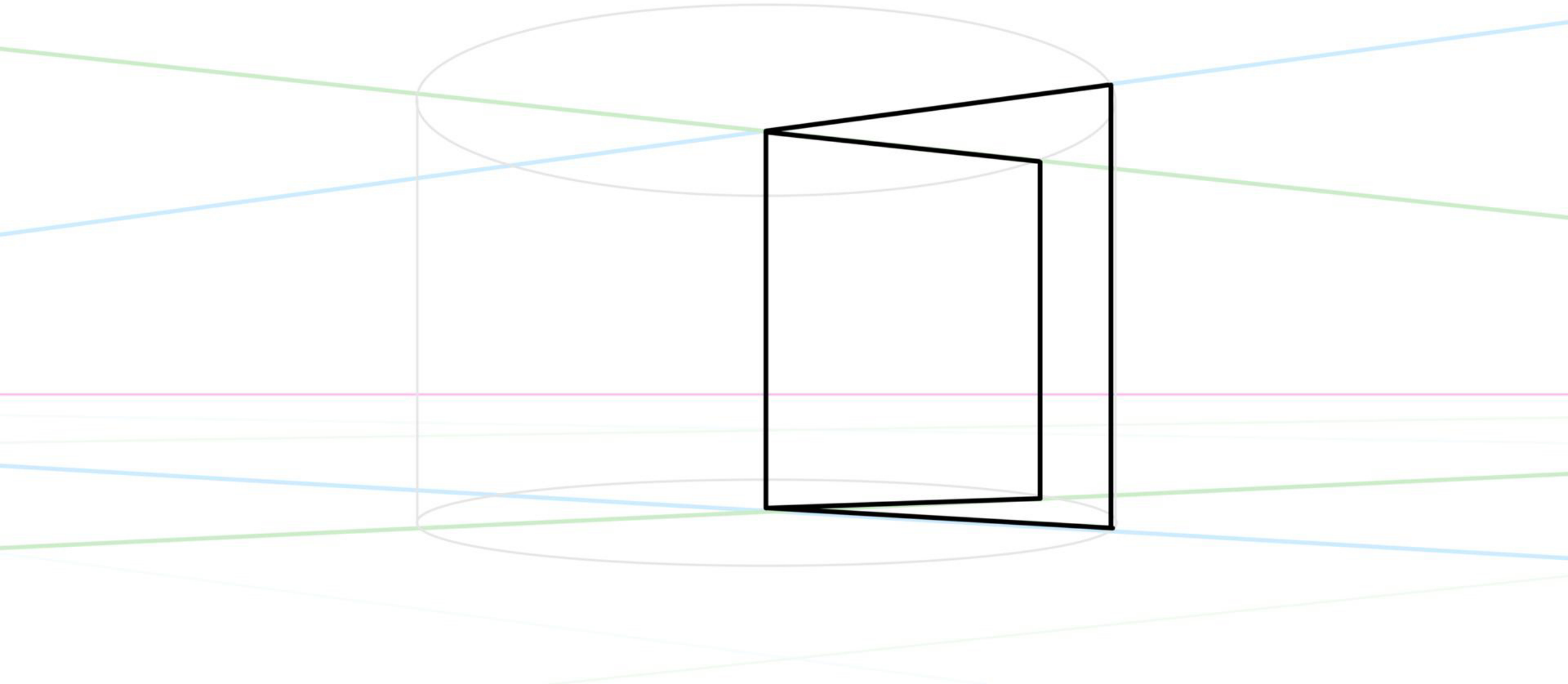
TIP: Have your perspective lines run through the top and bottom of your Center Line (this will be a corner of all your cubes).



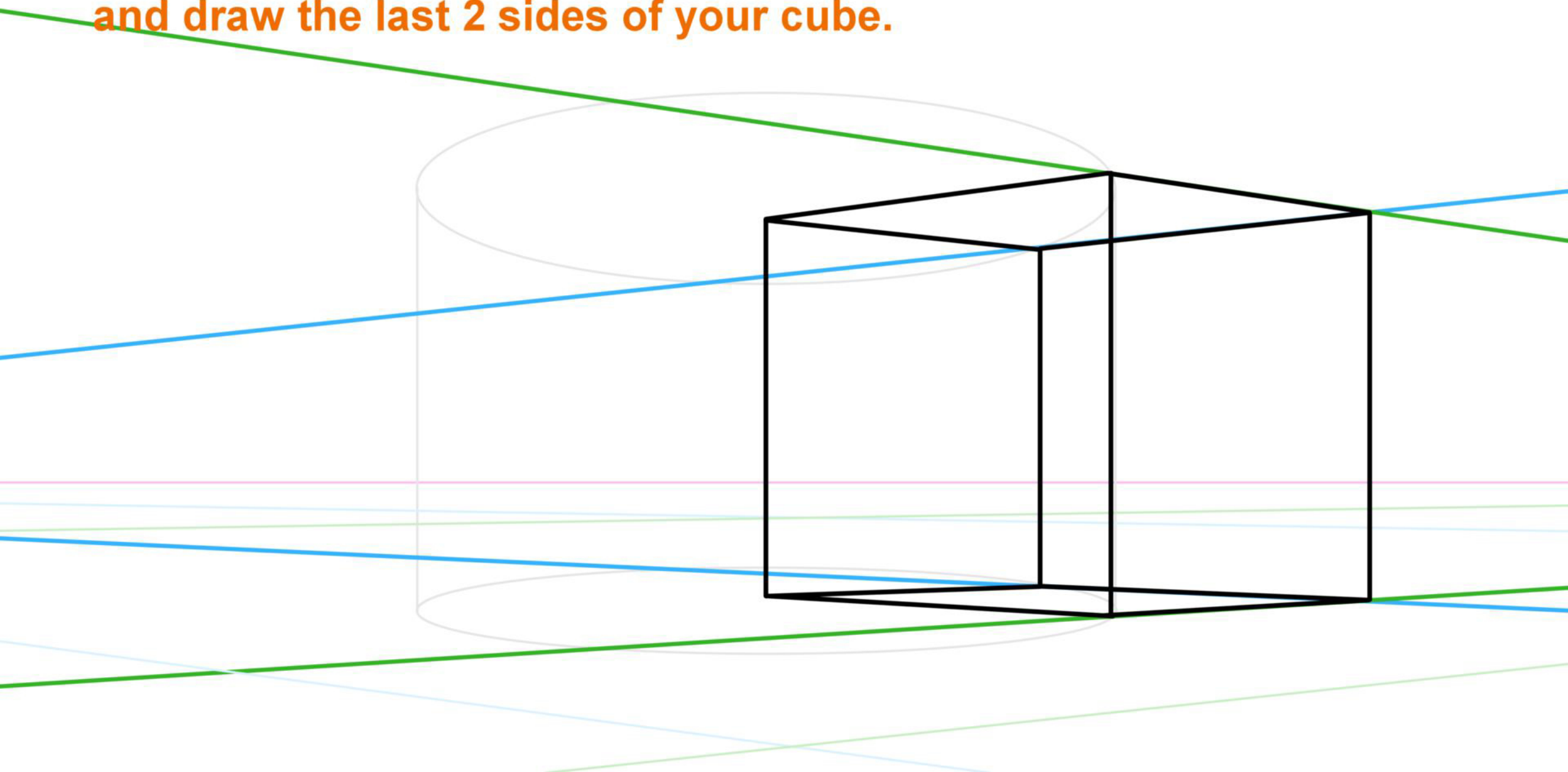
Draw a square from the Cube Line and out to the edge of the Cylinder, using one vanishing point.



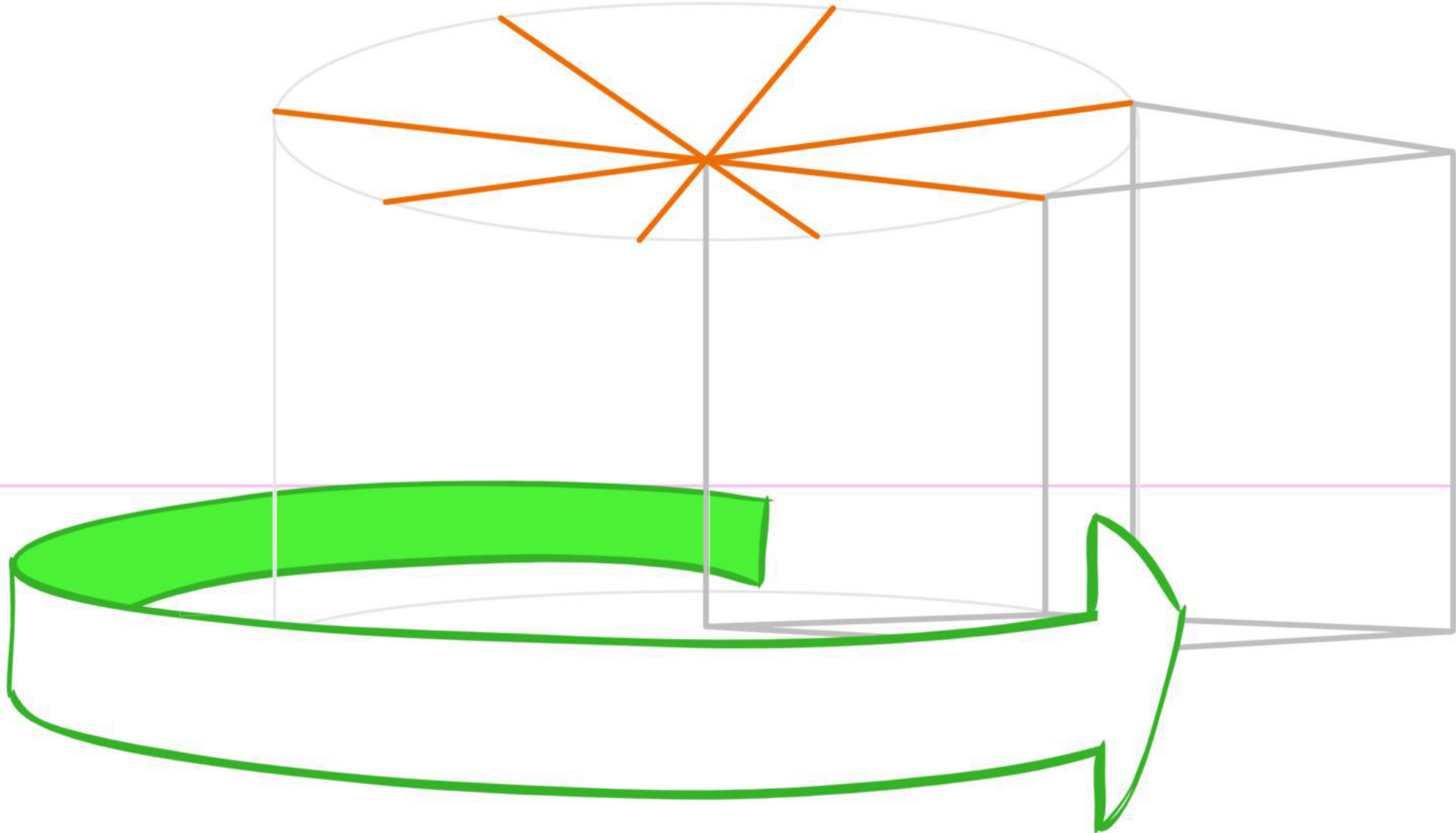
Do the same from the other vanishing point.



Move the perspective lines (blue and green) to your new corners and draw the last 2 sides of your cube.



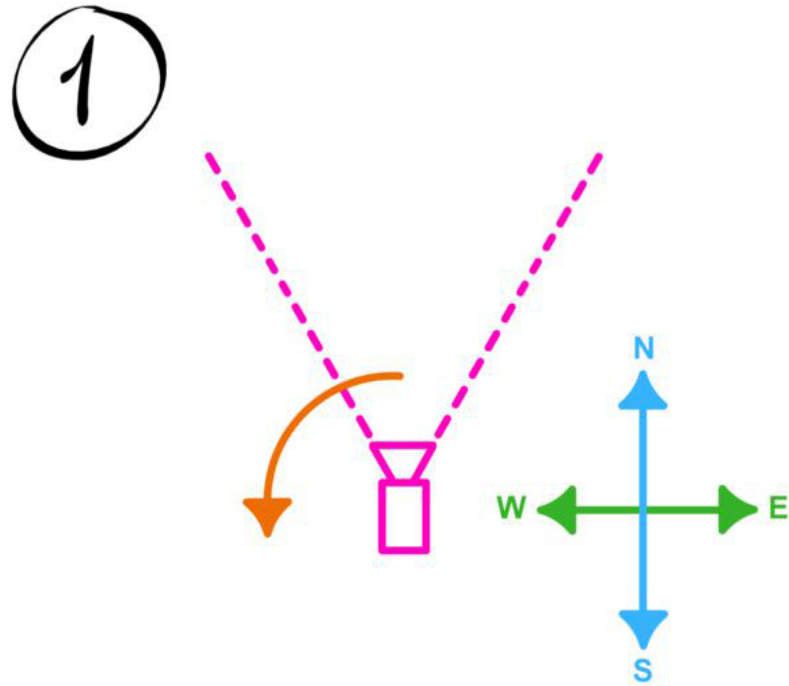
Draw several cubes by moving the vanishing points on the Horizon Line each time. One corner should always be at the center of the cylinder.
TIP: When one vanishing point reaches the center of the image you get a 1 point perspective.



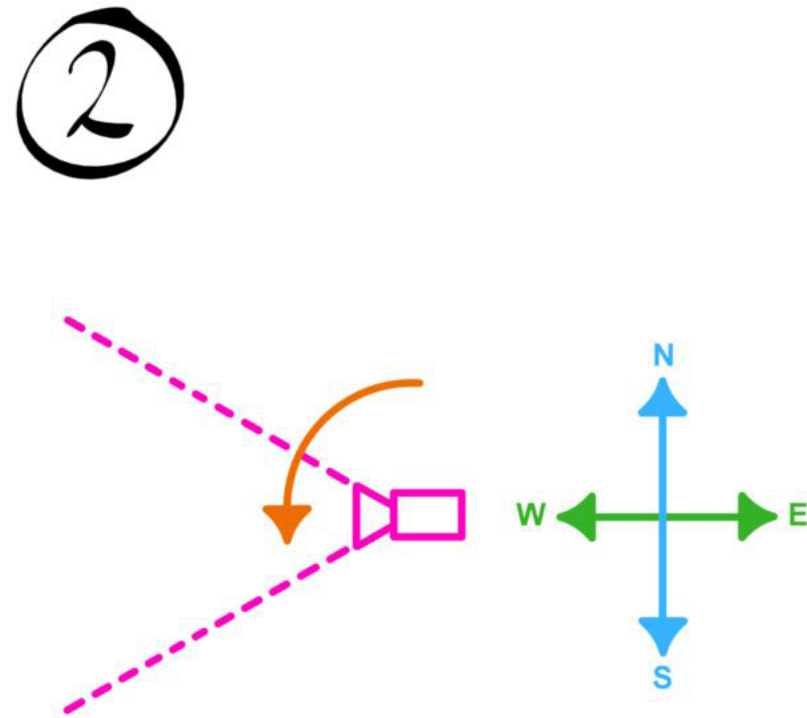
Exercise 2: Rotate the camera 90 degrees.

I've drawn the first and last position. Do the inbetweens by re-drawing the perspective in each panel. (3 inbetween panels should be enough)

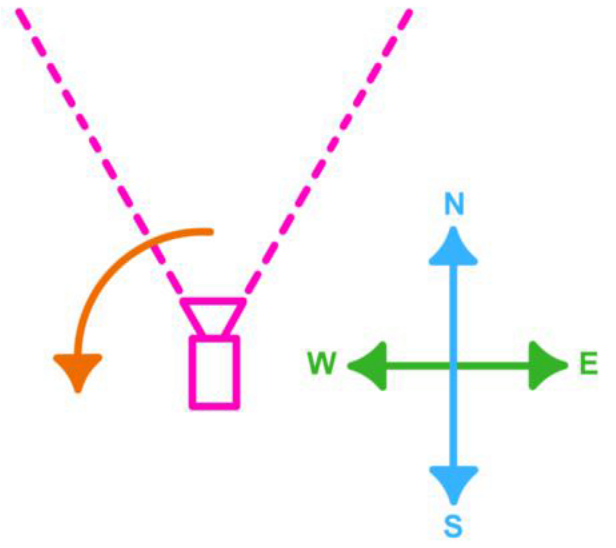
TIP: When inbetweening a camera move I find it helpful first focus on that the Horizon line, then one perspective point, then the next. I do all these steps in one panel, before moving on to the next.



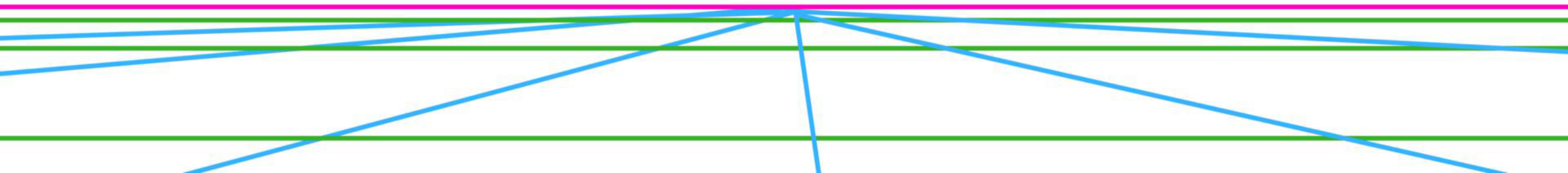
Top View

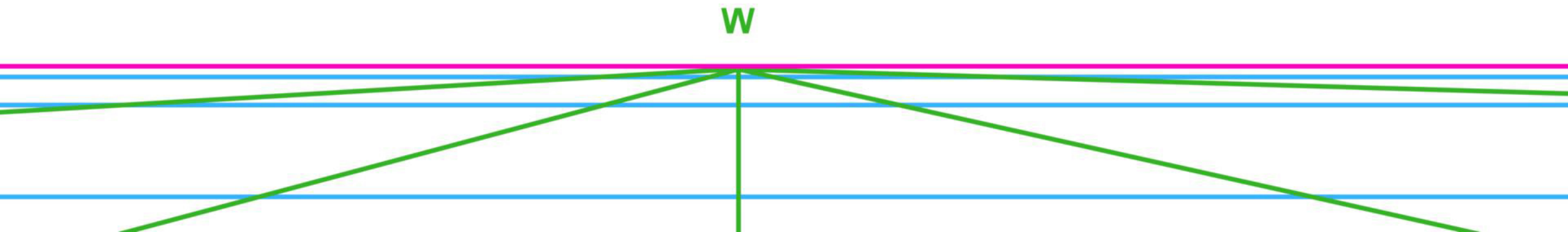
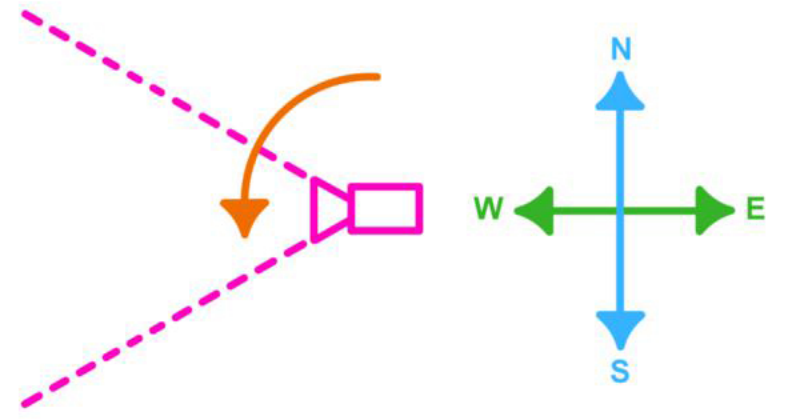


Top View



N



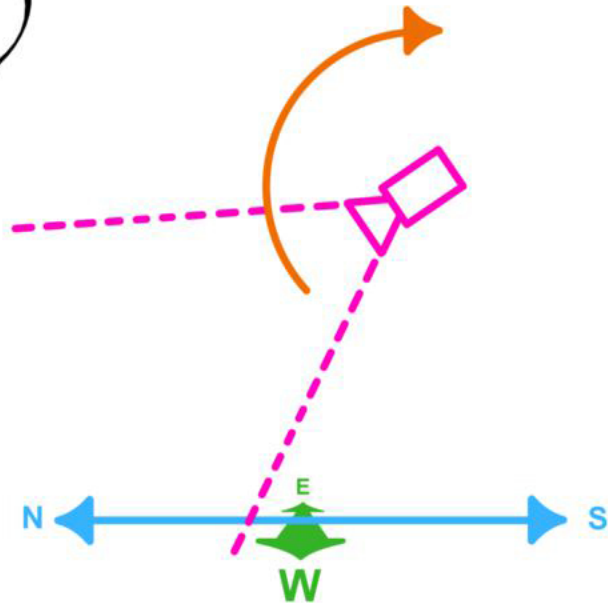


Exercise 3: Rotate the camera up.

I've drawn the first and last position. Do the inbetweens by re-drawing the perspective in each panel.

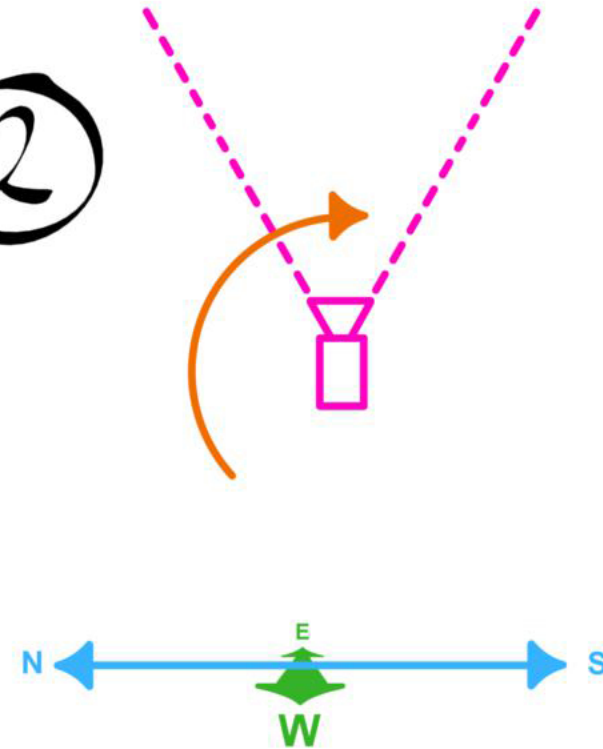
TIP: Remember the perspective grid can be drawn above and below the Horizon Line.

①



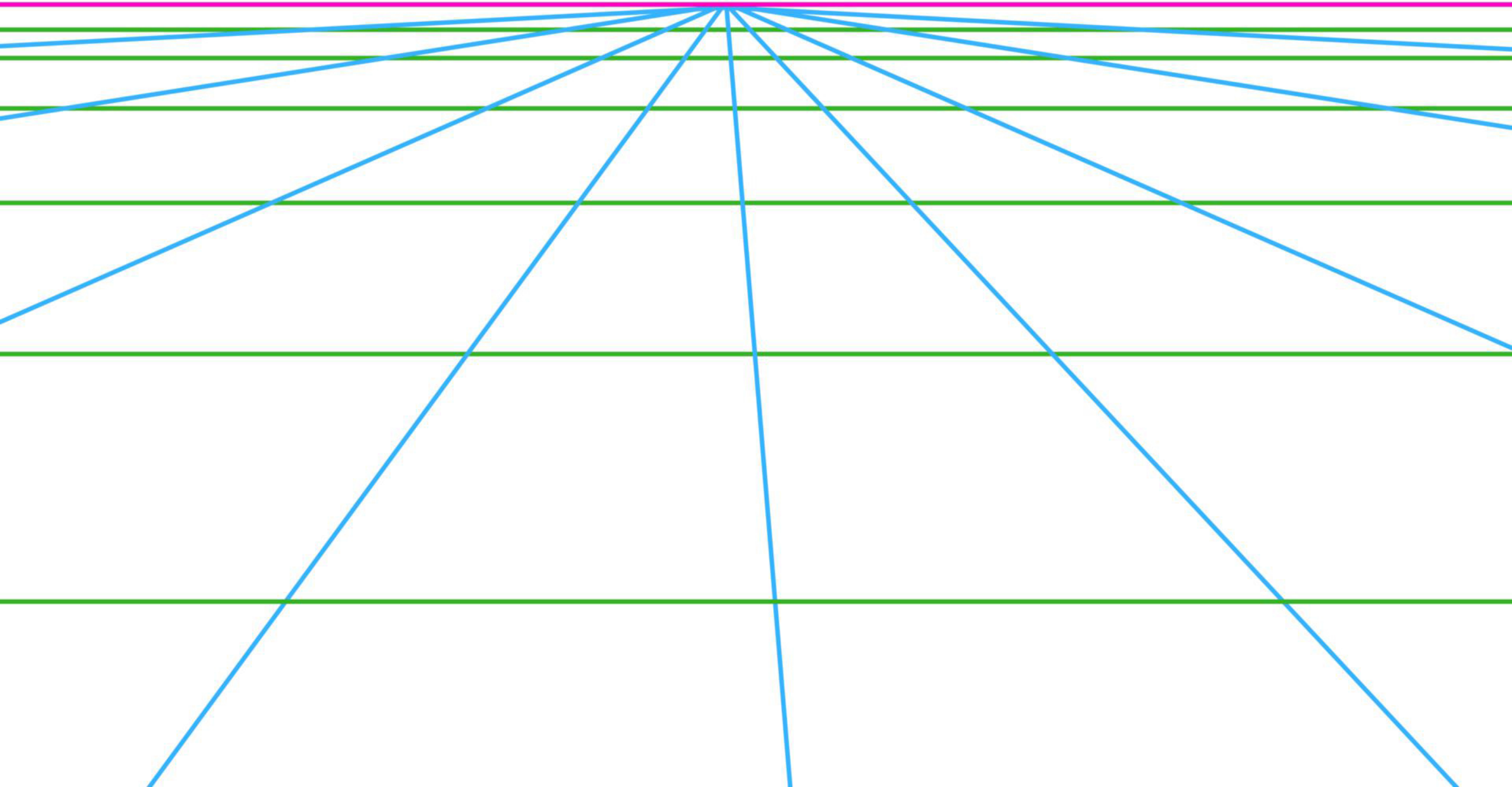
Top View

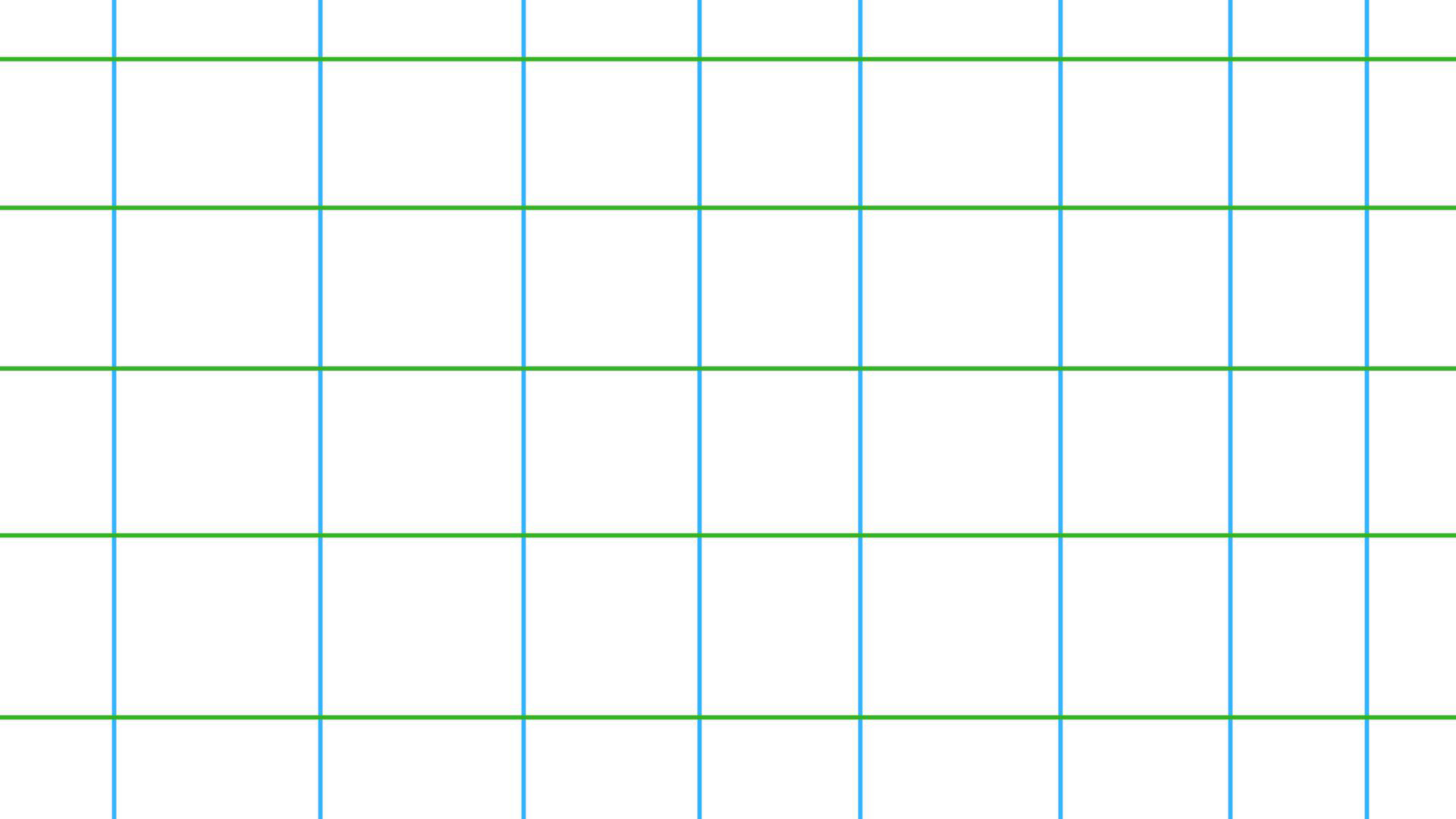
②



Top View

N



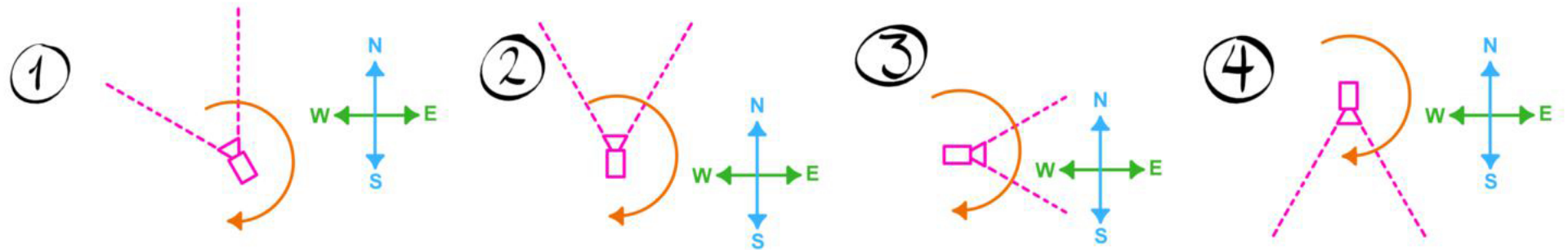


Exercise 4: Rotate the camera around with up/down tilts.

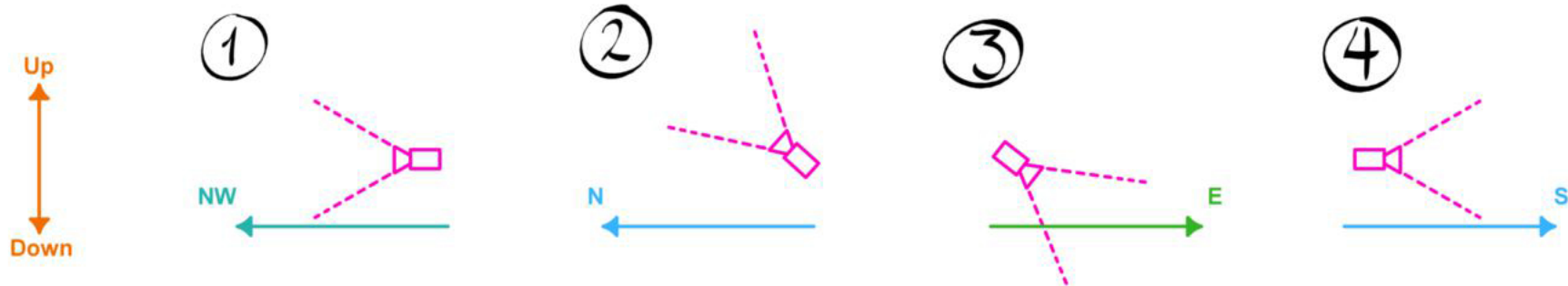
Rotate the camera from **North West** (1) to **South** (4). Tilt the camera up when it's facing **North** so that the vanishing point at **North** is out of shot (2). Then Tilt the camera down when it's facing **East** - the **Horizon Line** should just be within the frame (3). Then tilt the camera back to the last panel facing **South** (4). Also add some Dutch Angles as the camera pans around.

I've drawn the first and last position. Do the inbetweens by re-drawing the perspective in each panel.

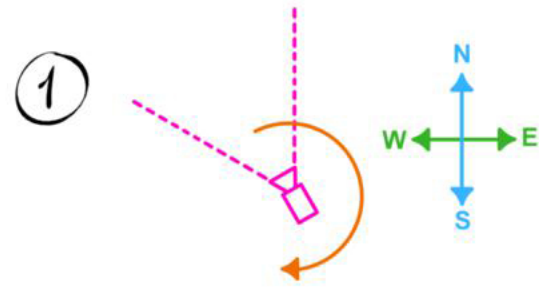
Top View



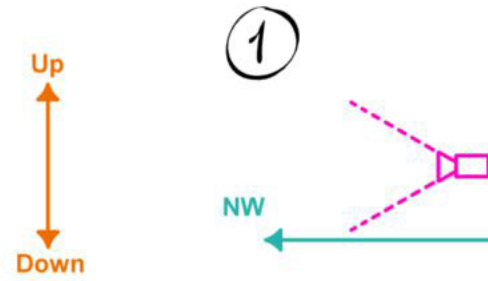
Side View



Top View



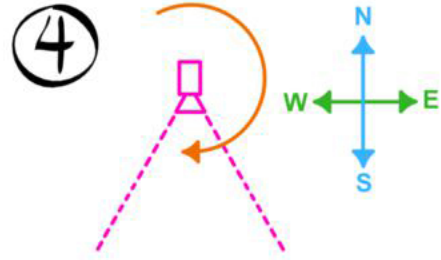
Side View



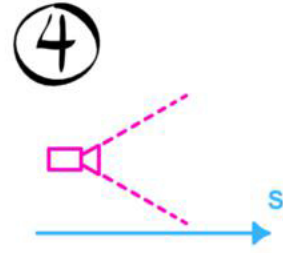
W

N

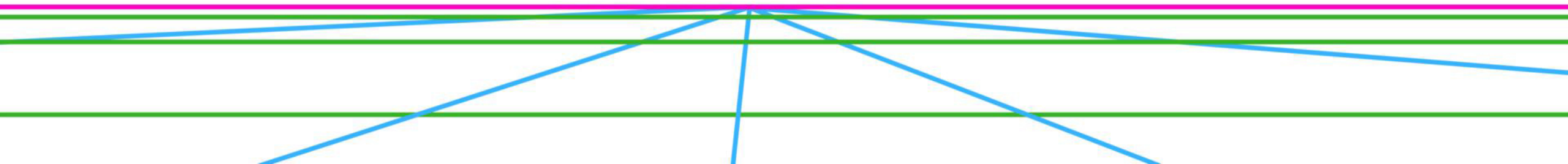
Top View



Side View



S

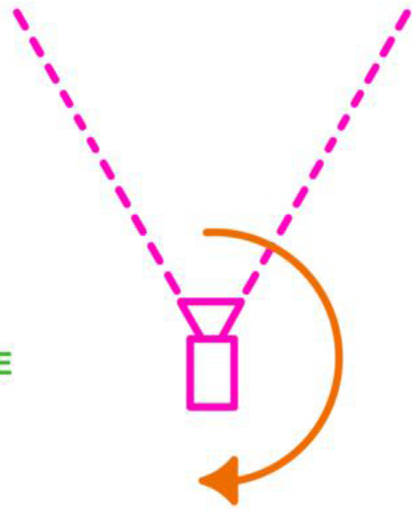
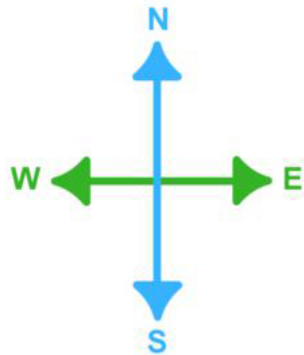


Exercise 5: Rotate the camera 180 degrees.

Rotate the camera 180 degrees from **North** to **South**. But this time do it by only using 1 panel (This is handy for 2D shows).

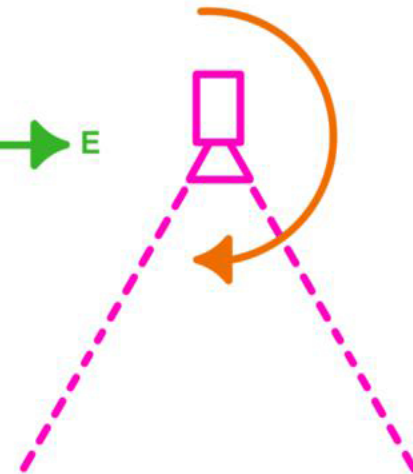
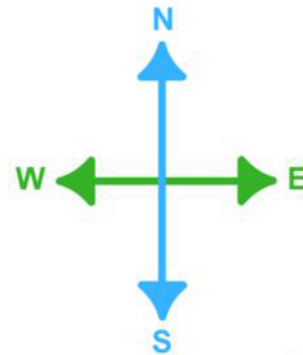
TIP: The lines on the perspective grid needs to curve.

①



Top View

②



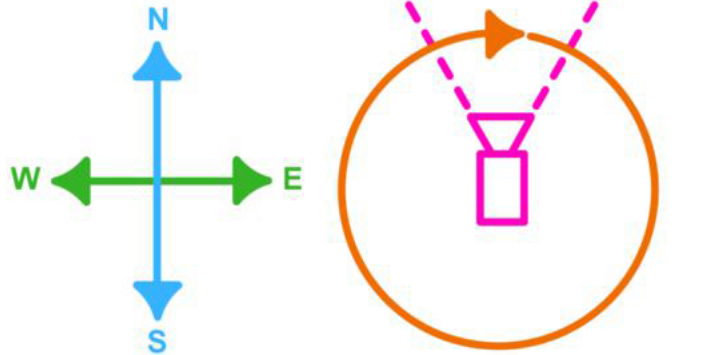
Top View

Exercise 6: Rotate the camera 360 degrees.

Rotate the camera 360 degrees from **North** and back to **North**. Do it by only using 1 panel (This is handy for 2D shows).

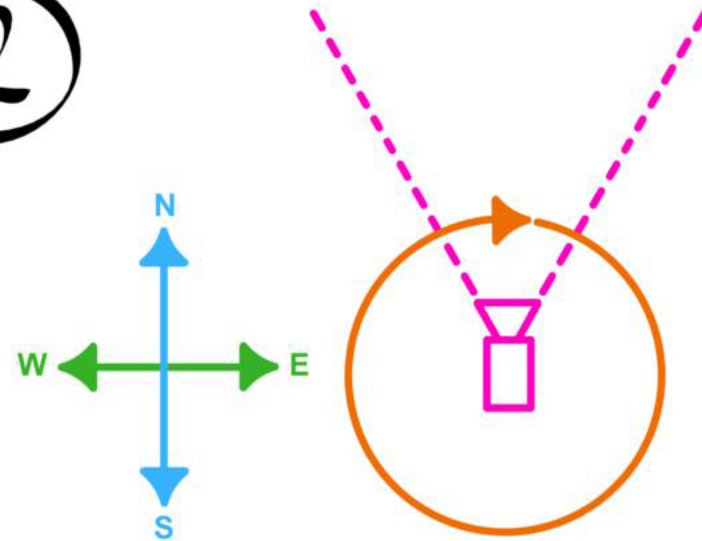
TIP: The lines on the perspective grid needs to curve.

①



Top View

②



Top View

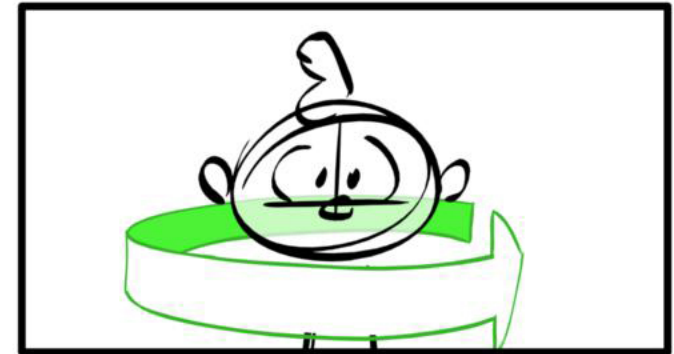
Exercise 7: Add 1 character to the 360 camera move.

For this you need a software where you can animate the layers on the timeline (Storyboard Pro, After Effects, etc.)

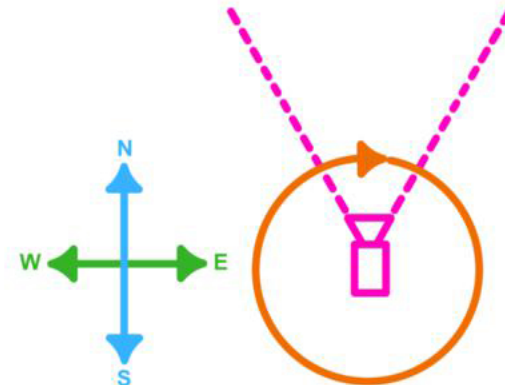
Draw a simple character in a medium shot in the middle of the frame. Draw him rotating on the spot. Keep the character design simple. Pan the perspective from one end to the other by setting keyframes on the layer.

TIP 1:

When Camera is facing		the character should face
North		straight into camera
East		screen right
South		straight away from camera
West		screen left



Top View

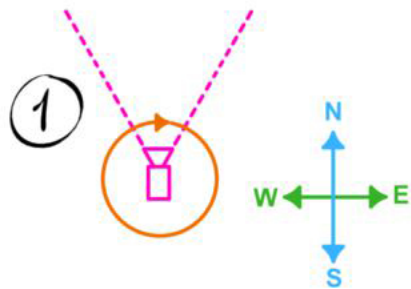
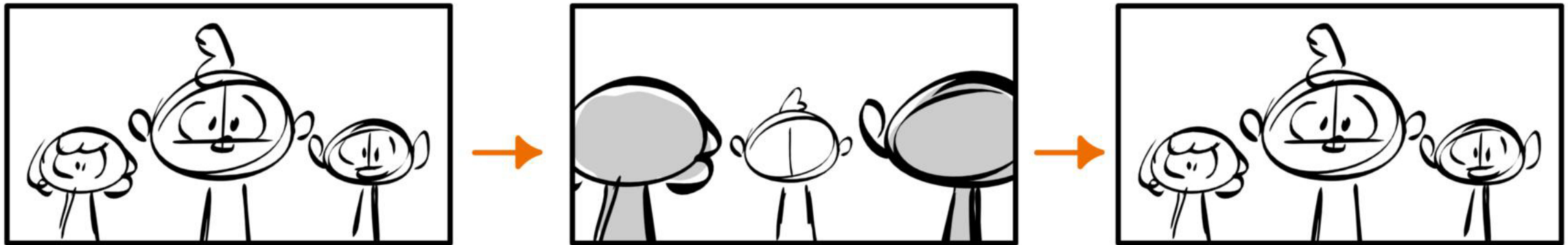


Exercise 8: Add 2 characters behind the first one.

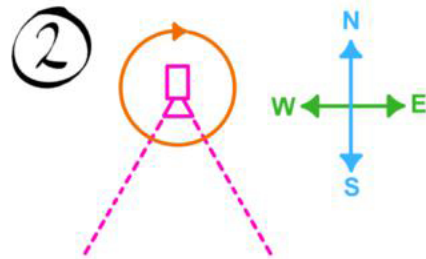
Place 2 more characters in the shot. They should be behind the first character when they are facing the camera, but between the camera and the 1st character when they are facing away from the camera.

TIP 1: The 2 new characters will slide in and out of shot.

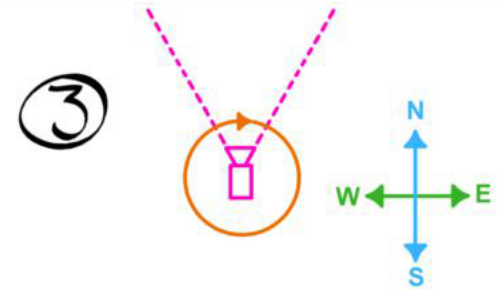
TIP 2: Draw the 2 new characters on separate layers.



Top View



Top View



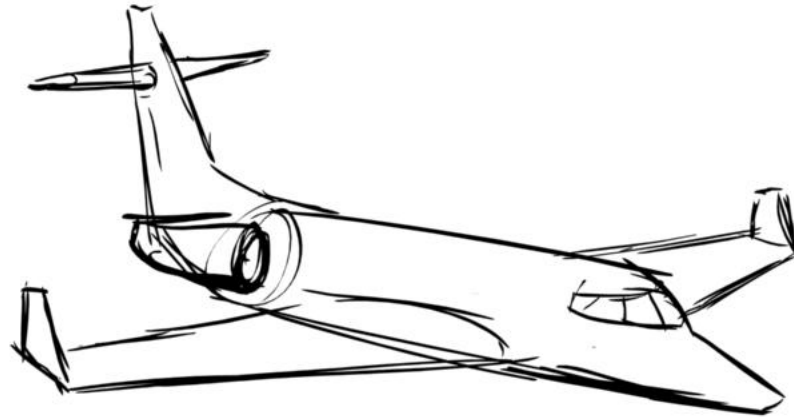
Top View

Exercise 9: Storyboard an airplane flying through the air.

Storyboard an airplane flying dynamically through the air using the movement described on the following pages.

TIP: Break down the movement and key frame the camera (perspective) and then inbetween it.

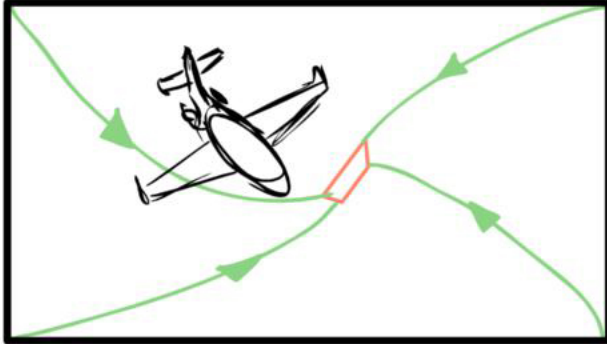
TIP 2: Work rough! Don't worry too much about keeping the airplane on model etc. The point of the exercise is to be in control of the perspective, not to draw pretty airplanes.



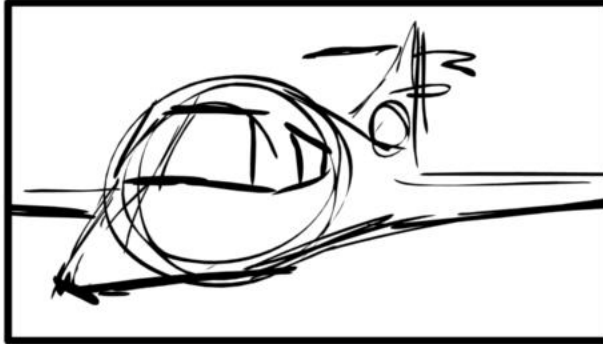
You can use this design or make your own.

Exercise 9: Storyboard an airplane flying through the air.

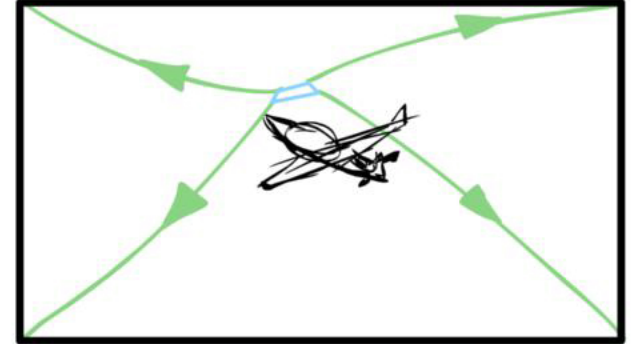
Storyboard it using these shots. I have only drawn a thumbnail and without any perspective. That's for you to figure out.



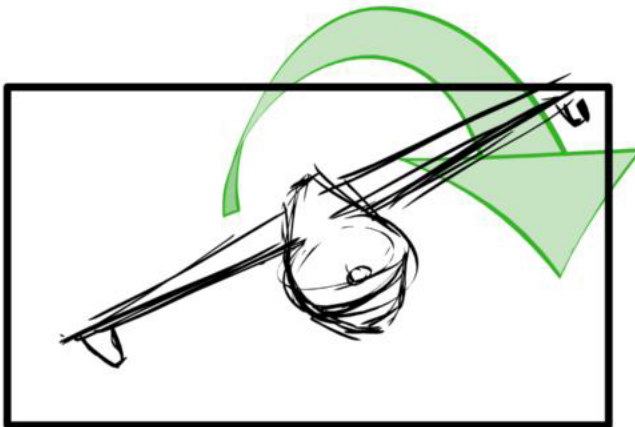
Down shot of airplane. The camera moves down ...



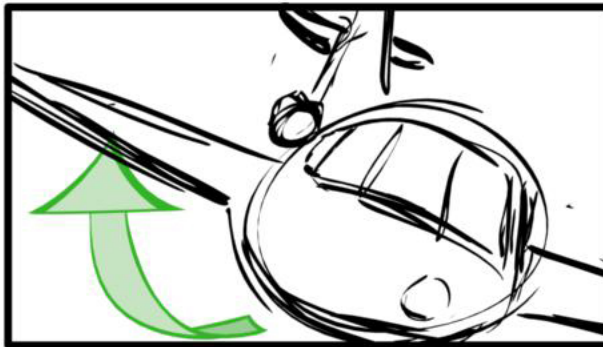
... to the front of the airplane and crosses the 180 line ...



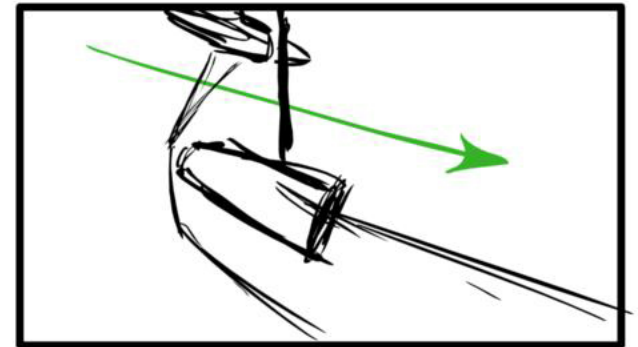
... constantly moving down till it ends up looking up at the plane.



Plane spins and dives down towards the camera.



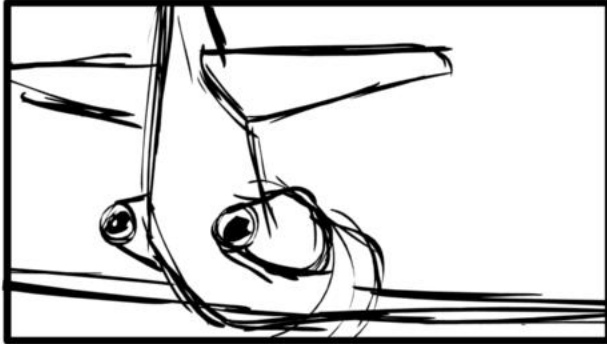
Camera is tracking back with plane, but plane is catching up ...



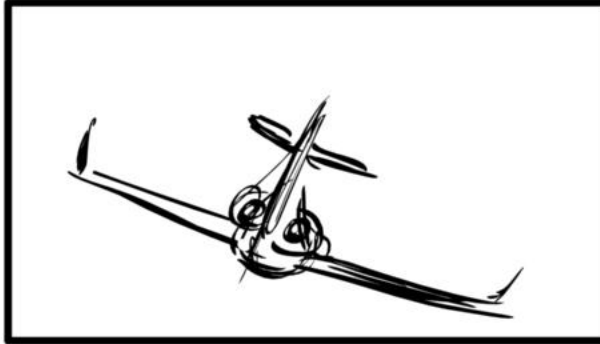
... and passes the camera.

Exercise 9: Storyboard an airplane flying through the air.

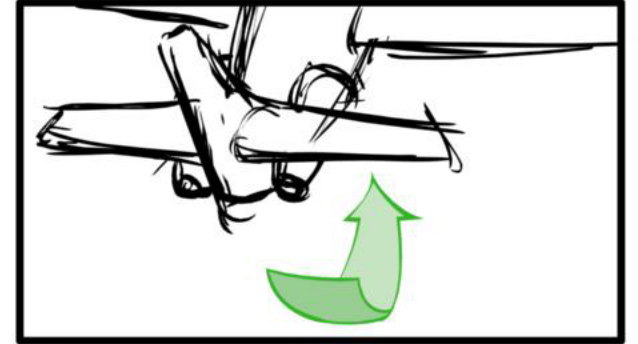
Storyboard it using these shots. I have only drawn a thumbnail and without any perspective. That's for you to figure out.



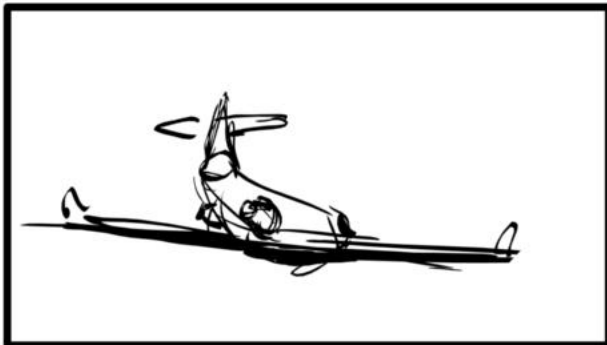
The camera pans around with the plane ...



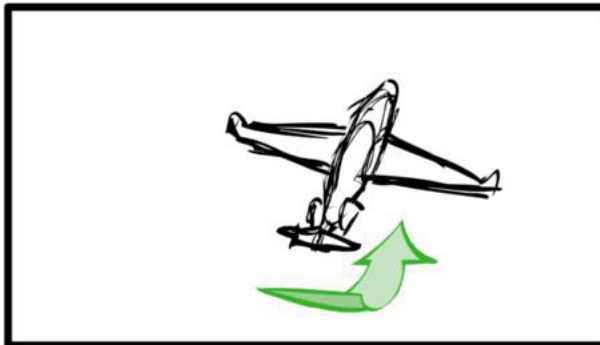
... and tracks with it as it is heading straight towards the ground.



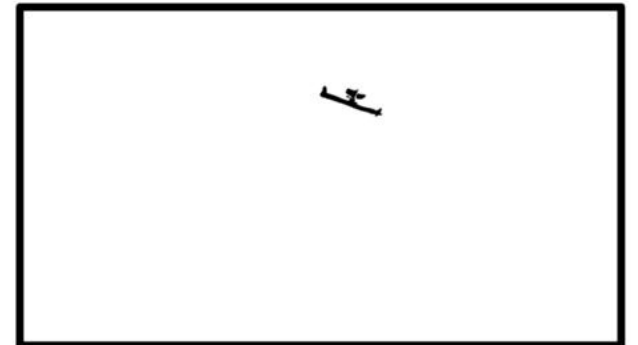
Right before it hits the ground, the plane breaks up ...



... and flies right above the ground. The camera is even closer to the ground. Add a 3 panel cycle



The plane breaks up towards the sky ...

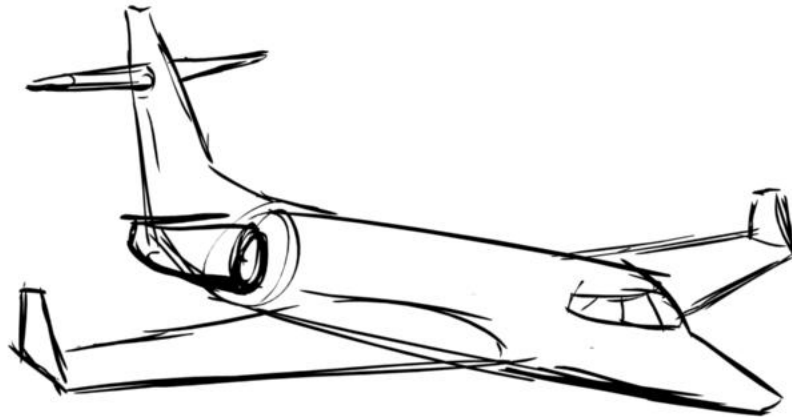


... the camera follows tilting up as well, but slows down as the plane flies into the distance.

Exercise 10: Storyboard an airplane flying through the air.

But this time design the movement yourself. Make sure to include the points below:

- During the shot the airplane should at some point be in a Long Shot, Medium Shot and Close Up**
- During the shot you should look up at some point and look down at another point.**
- During the shot the camera should cross over the 180 line at least once.**



You can use this design or make your own.