

Unit 3 Intro: Intersecting Lines and Perspective

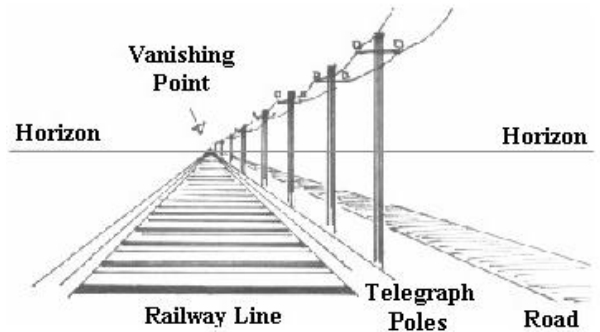
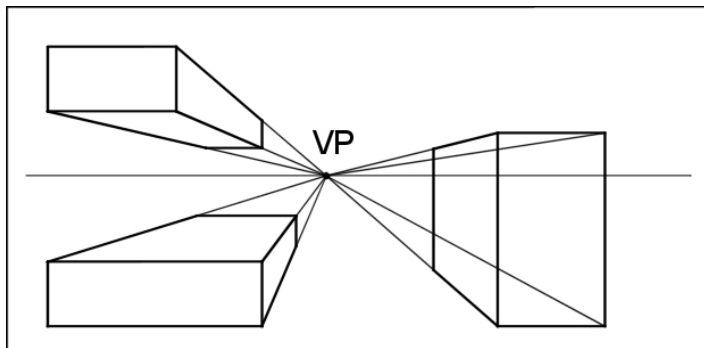
When artists want to create an illusion that an image has depth, they use what is called **Perspective**.

The example to the right is called **One-Point Perspective**. Notice how if you follow the lines that go down the centre or edges of the road, or the lines along the top edges of the buildings, they all seem to meet at one point. This point is called the **vanishing point**.

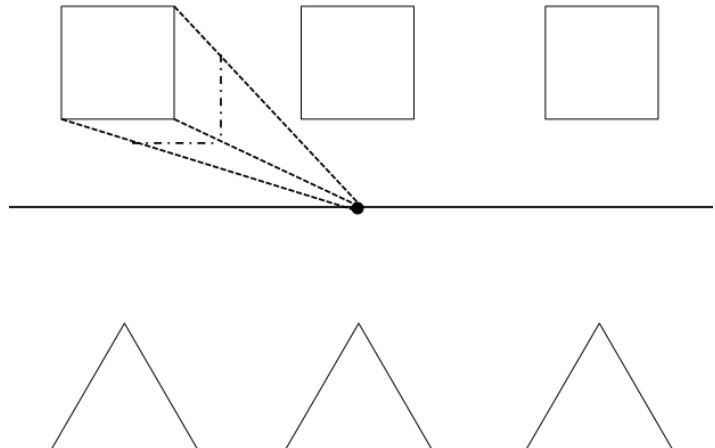
In this assignment, you will be creating your own one-point perspective drawing and then analyze it using some math...



In the example below, you can see how the edges from the boxes go to the vanishing point if you extend them. The horizontal line that the vanishing point sits on is called the **horizon line**.



1. **Try it out for yourself!** Use the cubes and triangles to the right to create 3D objects. The first one is done for you as an example.



2. **Now it's your turn to make your own 3D drawing using perspective!** You can create a scene, just use abstract shapes, make your name 3D or whatever you want. Google around for some ideas if you're stuck. The following steps will help you out:
- Start by drawing a horizon with a vanishing point on it
 - Then add stuff! It's easiest to add flat object and then make them 3D by connecting the corners to the vanishing point **using a ruler**. Remember, all parallel lines that go into the page should go through the vanishing point. Be creative and have fun with it!



3. **Let's do some math.** You'll notice your drawing will contain **lots** of intersecting lines.
- Cover your drawing with grid paper (provided by Mr Notten) and tape it on like a flap. Make sure the vanishing point is on a corner of the grid boxes.
 - Create an x and y axis through the vanishing point, add tick marks along the axes and number them
 - Trace 3 straight lines from your drawing onto the grid paper that go through the vanishing point. Label the lines A, B and C and determine their equations:

A: Slope _____ Y-intercept _____ Equation: _____

B: Slope _____ Y-intercept _____ Equation: _____

C: Slope _____ Y-intercept _____ Equation: _____

- Trace 2 straight lines from your drawing that DO NOT go through the vanishing point. Make sure these lines intersect on the page. Label the lines D and E and determine their equations

D: Slope _____ Y-intercept _____ Equation: _____

E: Slope _____ Y-intercept _____ Equation: _____

- Determine the coordinate of the **point of intersection** of the two lines: _____