

Math 129

Notes on Perspective

Basic concept: between the eye of the observer and the object to be drawn, there stands a transparent plane (called the “picture plane”) on which the form of the object is projected.

Observations in Perspective:

- Lines appear shorter than their true length, the shortening effect increases with distance.
- Vertical lines appear truly vertical.
- Groups of horizontal lines running in a single direction appear to converge toward a single point. Other groups of horizontals having different directions have different points of convergence.
- Circles appear “flat”, resulting in ellipses.

One-Point Perspective

Basic Principles:

All lines that are parallel in the real scene and perpendicular to the “picture plane” (plane of the canvas), must intersect at the *Principal Vanishing Point*.

All other parallel lines in the actual scene will also meet at secondary vanishing points. All of these vanishing points lie on a single straight line called the *horizon line*.