

PERPECTIVE PROJECTIONS OF 3 D OBJECTS

3 D

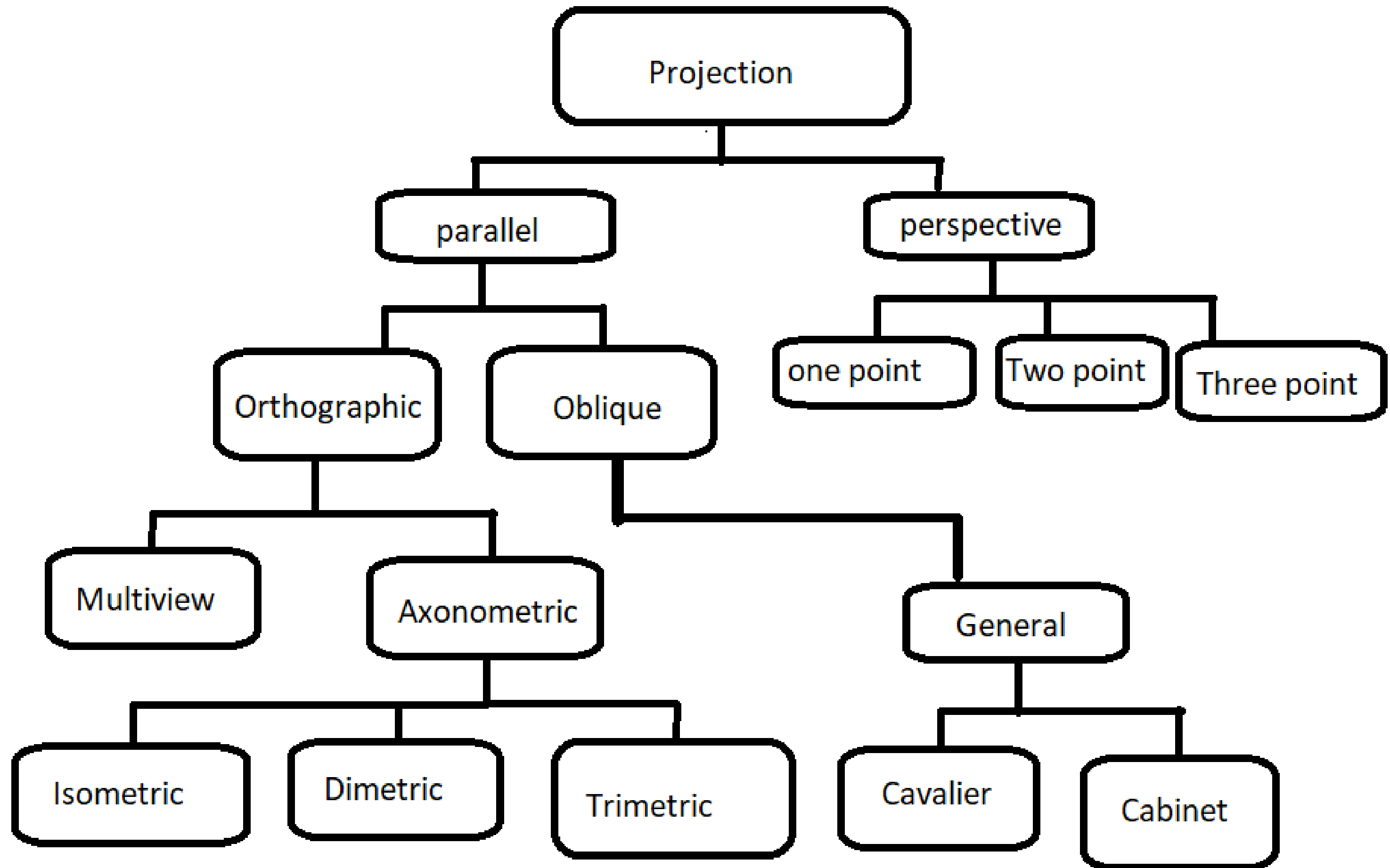
PROJECTION

Projection is a technique or process which is used to transform a 3D object into a 2D plane.

" In other words, we can define "projection as a mapping of points $P (x, y, z)$ on to its image $P' (x', y', z')$ in the projection plane or view plane, which create the display surface."

There are two basic projection methods :

- 1 .Parallel projection
- 2 .Perspective projection



PARALLEL PROJECTION

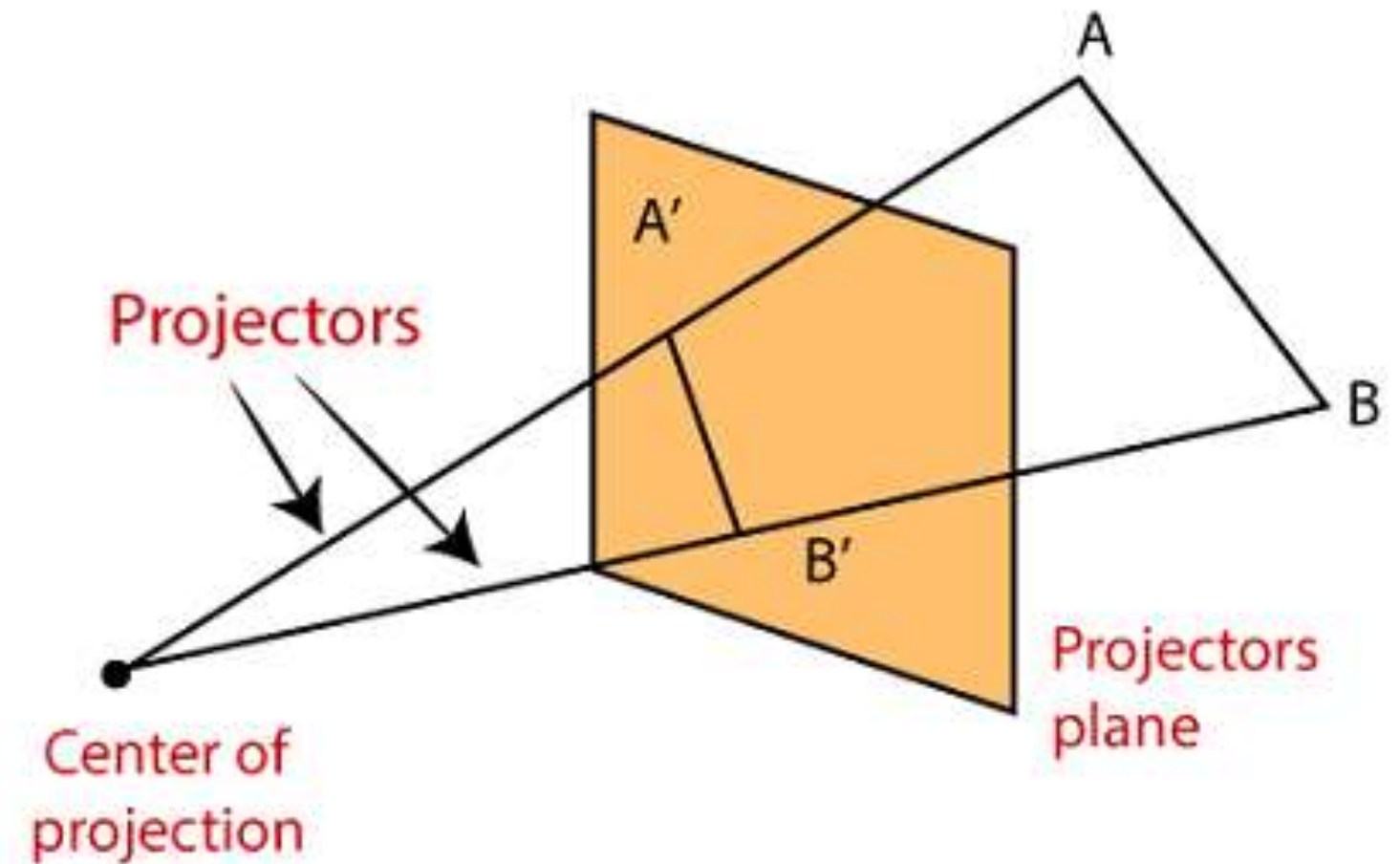
Coordinate positions are transformed to the view plane along parallel lines .

The image points are found as the intersection of the view plane with the projector

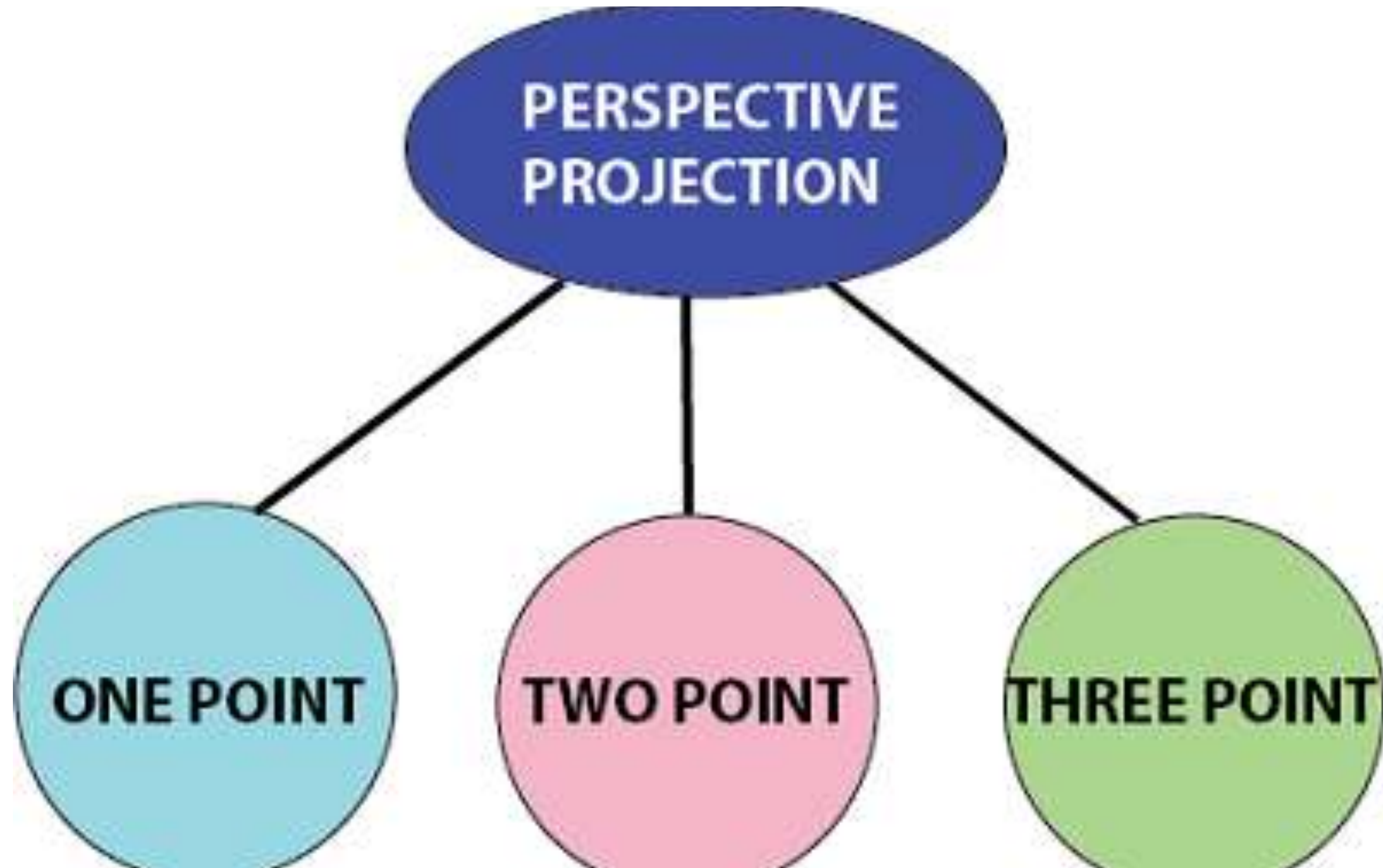
PERPECTIVE PROJECTION

Perspective projection is used to determine the projector lines come together at a single point. The single point is also called "project reference point" or "Center of projection".

Perspective Projection



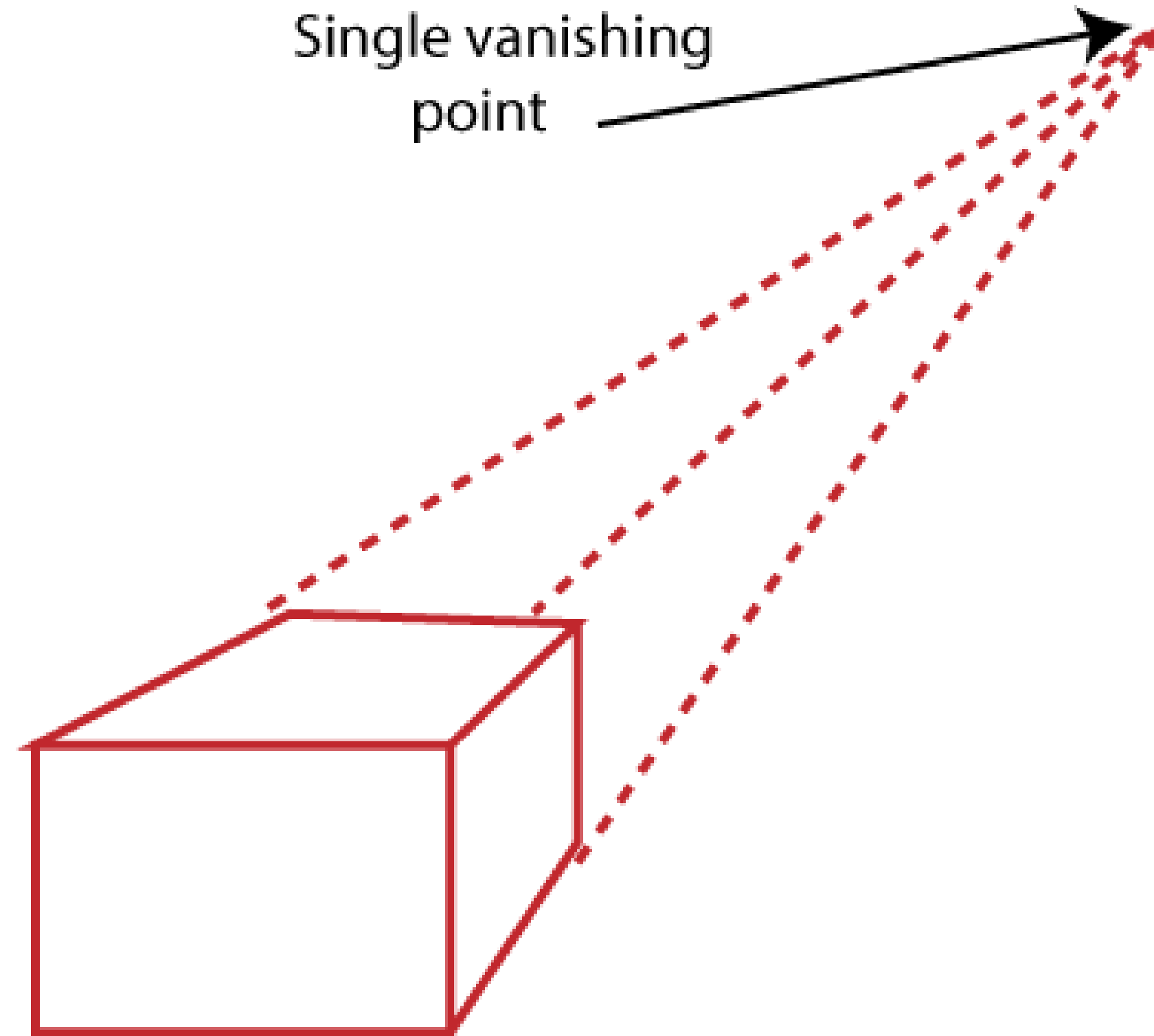
TYPES OF PERSPECTIVE PROJECTION



ONE POINT PERSPECTIVE PROJECTION

- One Point: A One Point perspective contains only one vanishing point on the horizon line.
- It is easy to draw.
- The One Point projection is mostly used to draw the images of roads
- railway tracks
- buildings.

EXAMPLE OF ONE POINT PERSPECTIVE PROJECTION



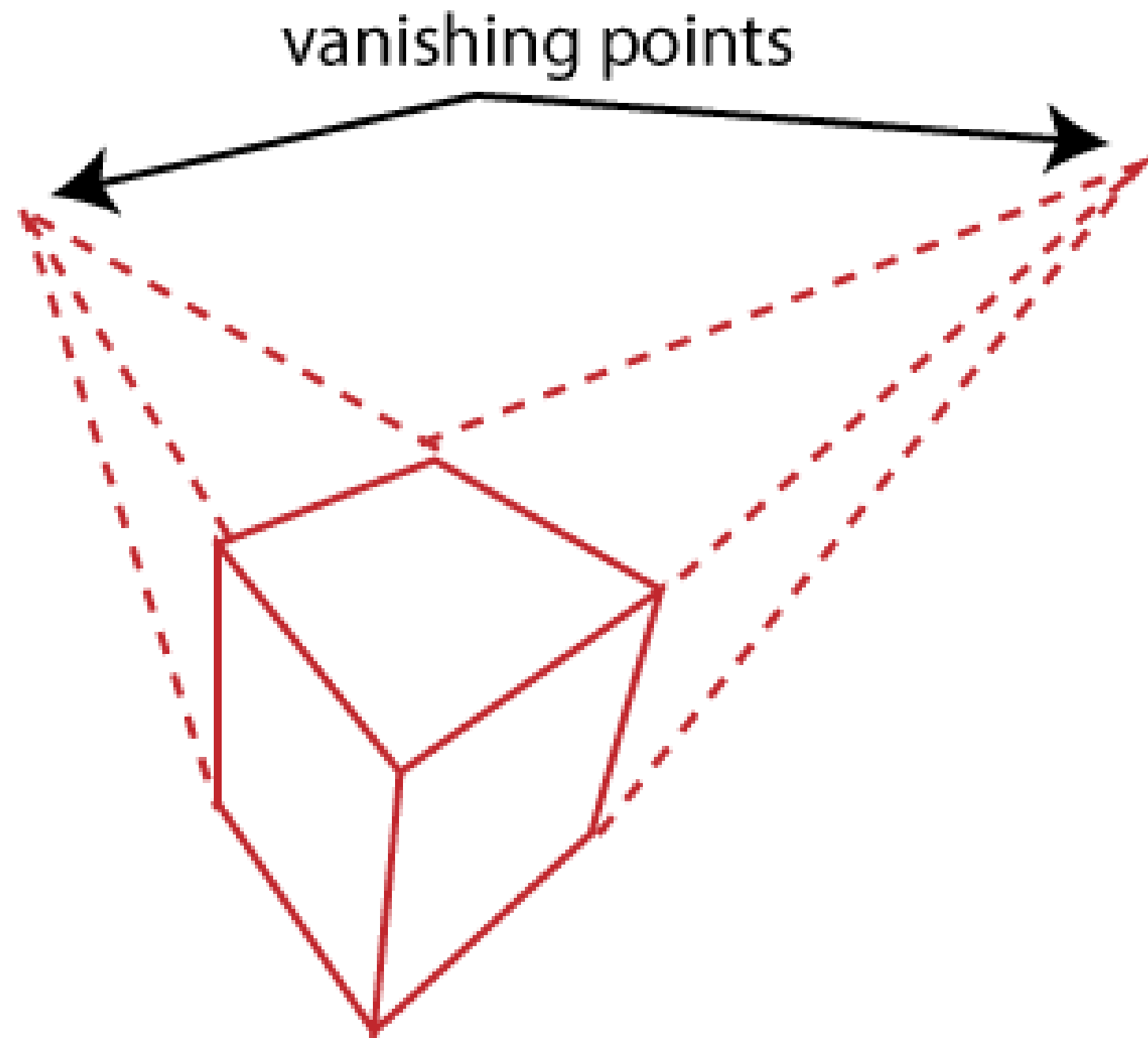
Single vanishing
point

one-point

TWO POINT PERSPECTIVE PROJECTION

- Two Point: It is also called "Angular Perspective."
- A Two Point perspective contains two vanishing points on the line.
- The main use of Two Point projection is to draw the two corner roads.

EXAMPLE OF TWO POINT PERSPECTIVE PROJECTION



two-point
perspective

THREE POINT PERSPECTIVE PROJECTION

- The Three-Point Perspective contains three vanishing points. Two points lie on the horizon line, and one above or below the line.
- It is very difficult to draw.

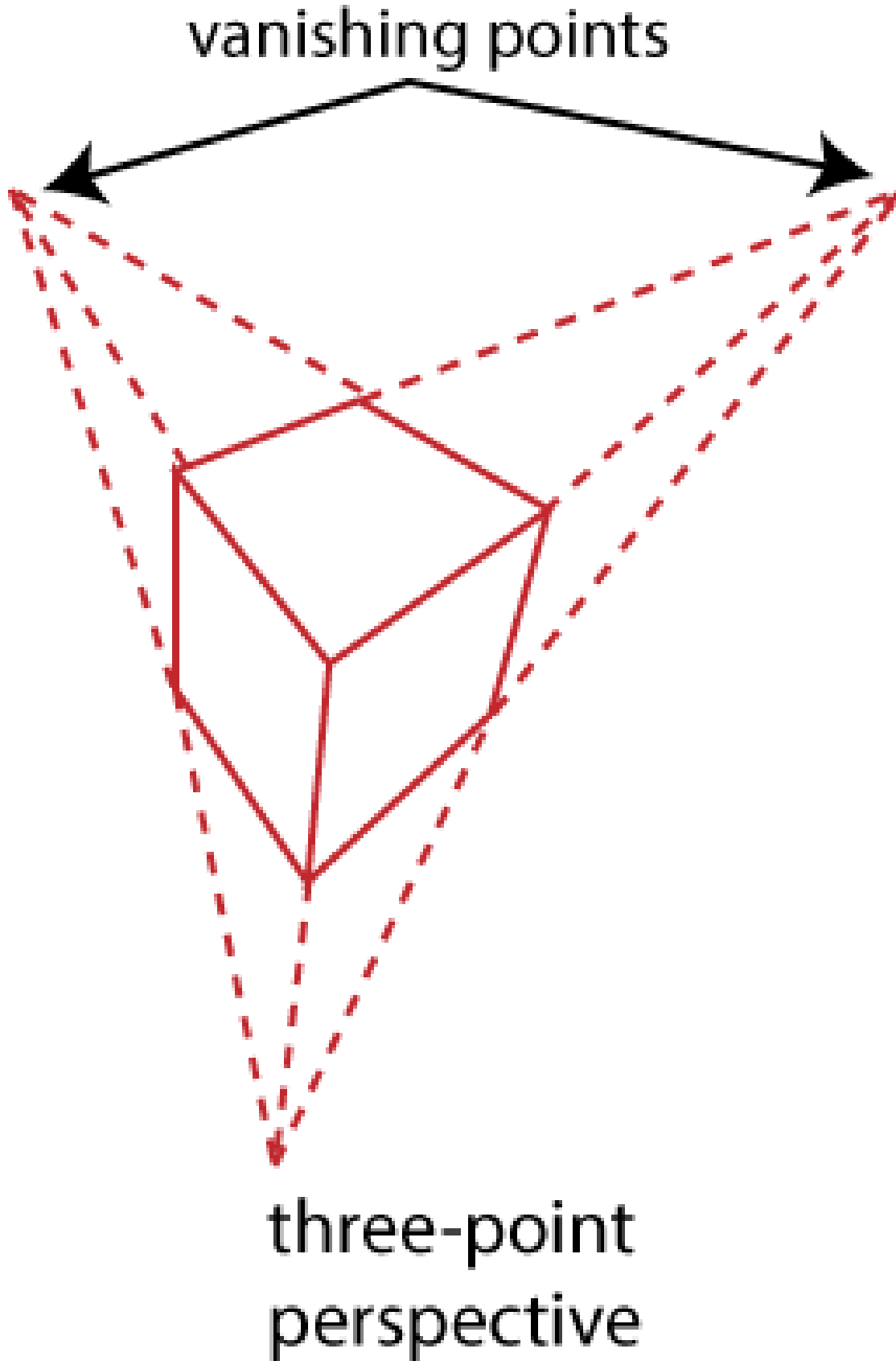
Use of Three-Point:

- It is mainly used in skyscraping.

Advantages:

- Better Look
- Clear Representation

EXAMPLE OF THREE POINT PERSPECTIVE PROJECTION



Thank

You