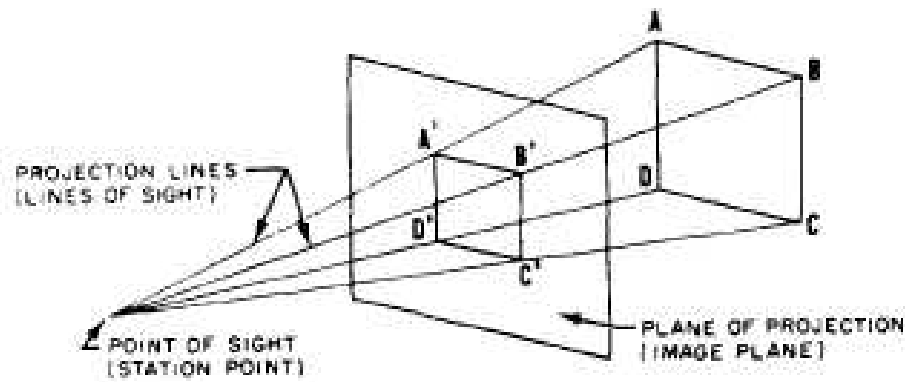


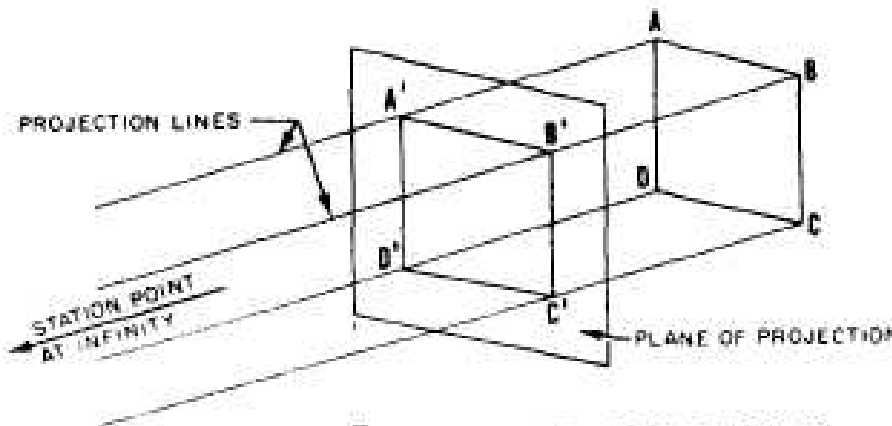
BASIC DESIGN 1

ORTHOGRAPHIC PROJECTION

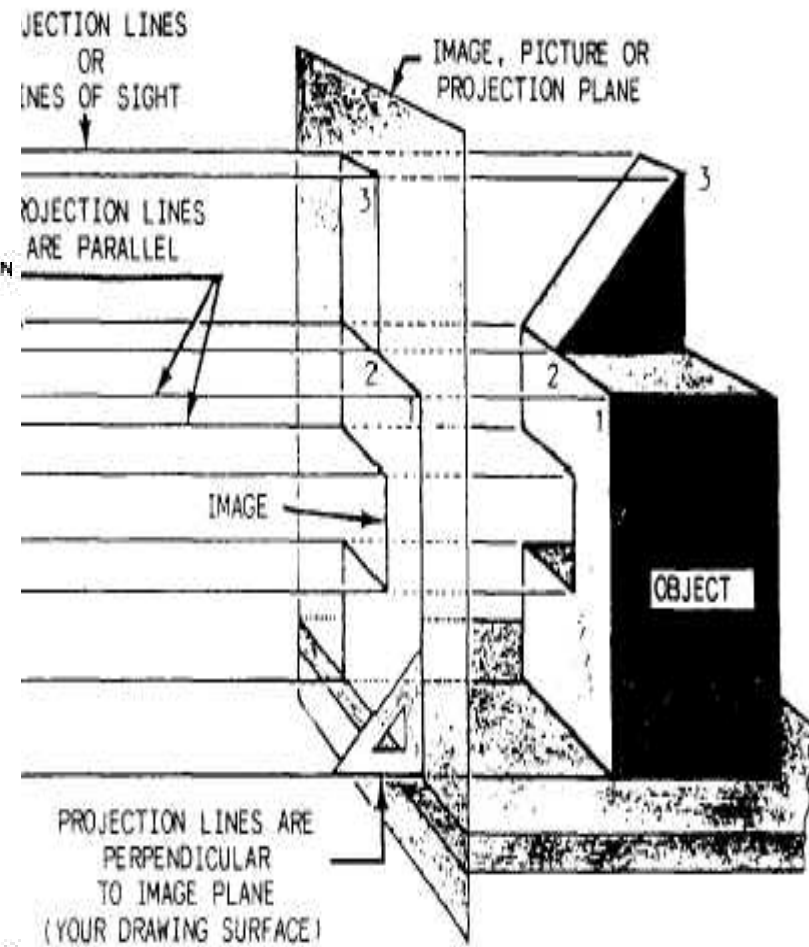
Dr. Hatem Galal A Ibrahim



A. PERSPECTIVE PICTORIAL PROJECTION



B. PARALLEL PROJECTIONS



PROJECTION LINES
OR
LINES OF SIGHT

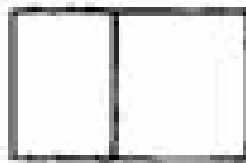
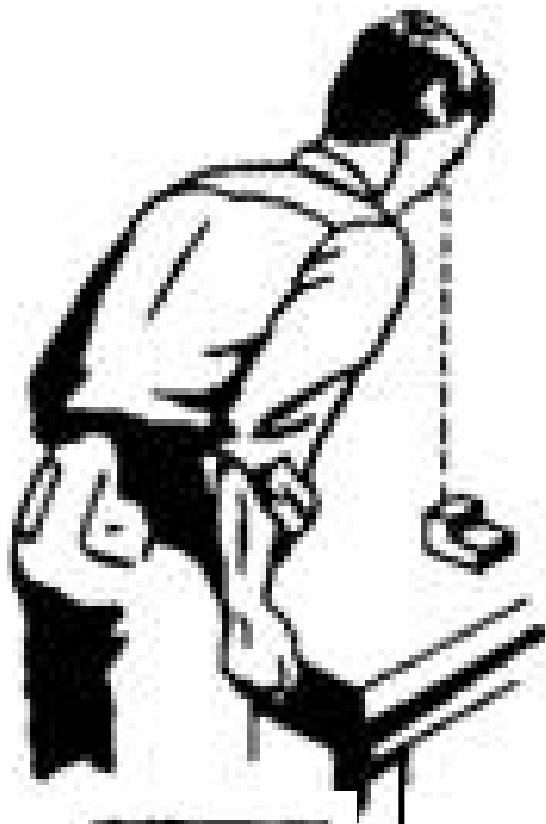
IMAGE, PICTURE OR
PROJECTION PLANE

PROJECTION LINES
ARE PARALLEL

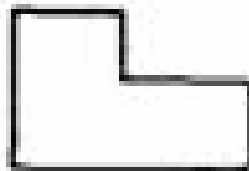
IMAGE

OBJECT

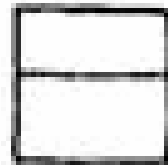
PROJECTION LINES ARE
PERPENDICULAR
TO IMAGE PLANE
(YOUR DRAWING SURFACE)



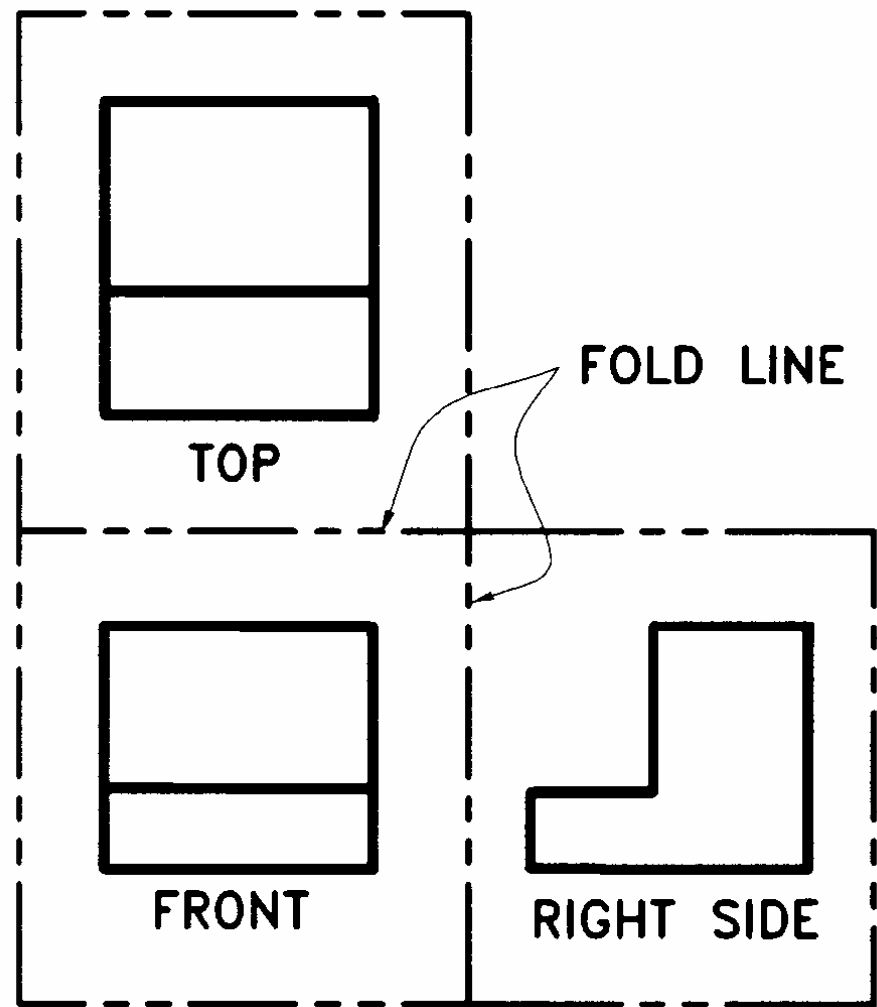
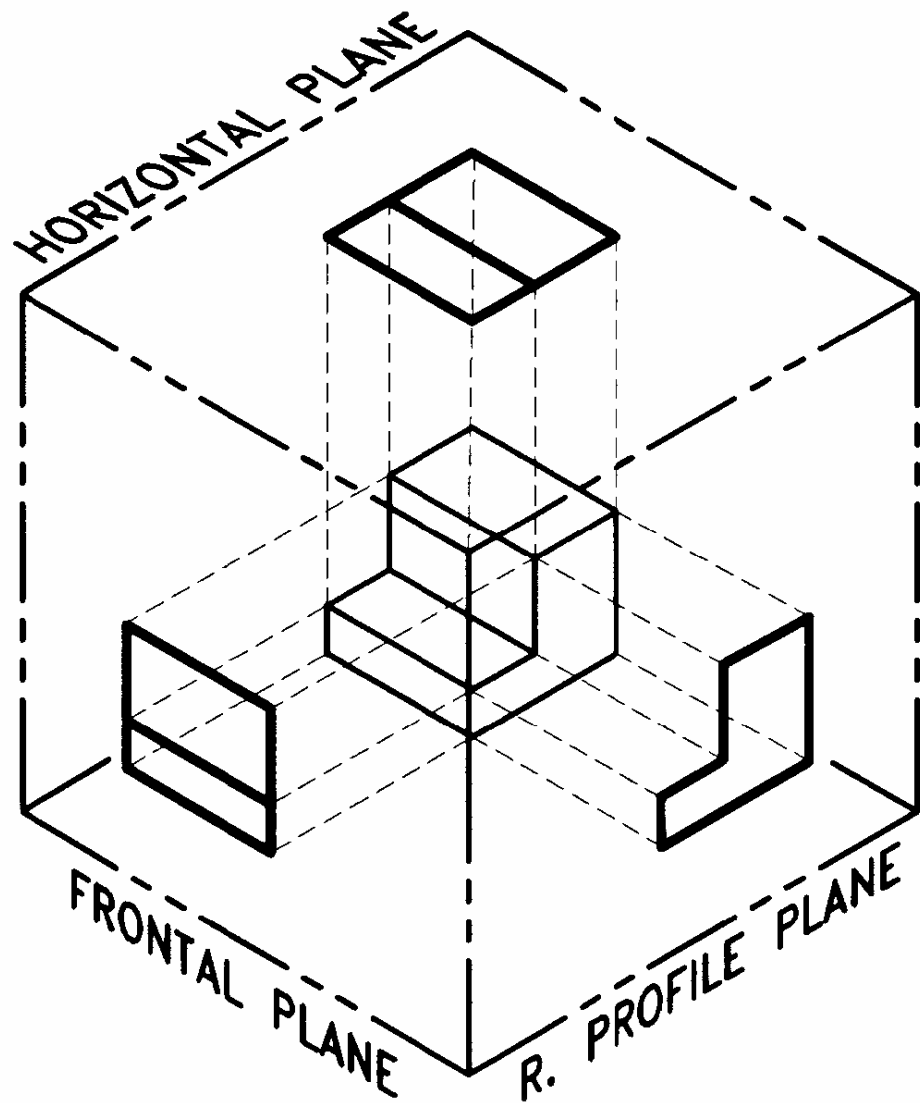
TOP



FRONT

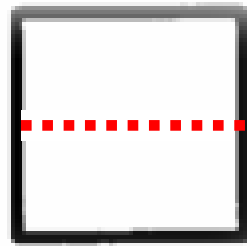
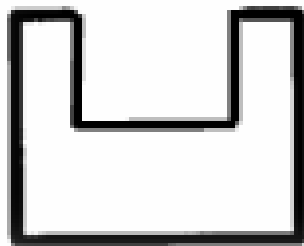
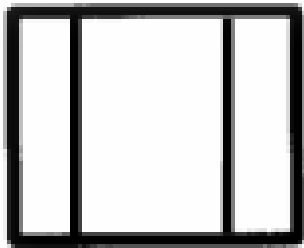


SIDE

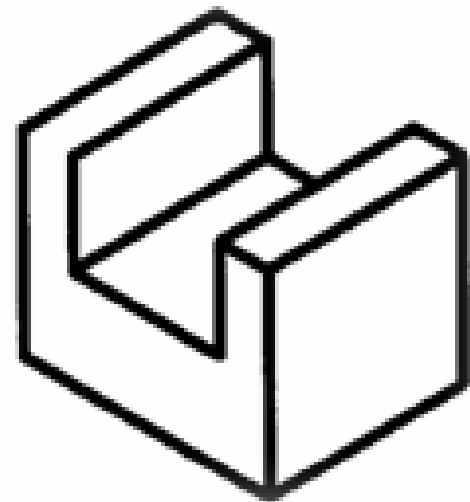


MULTIVIEW USING
THIRD-ANGLE
PROJECTION

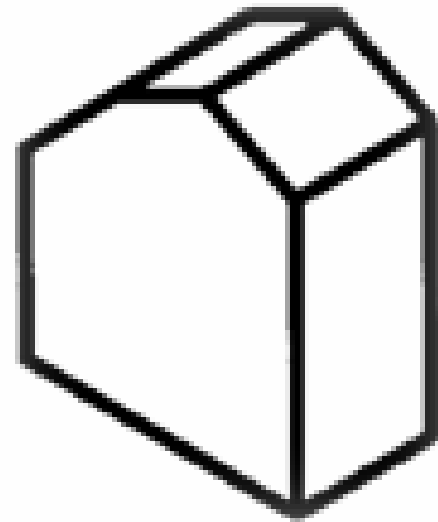
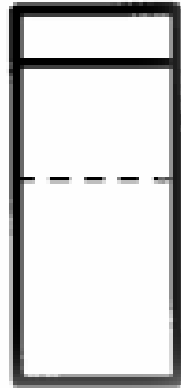
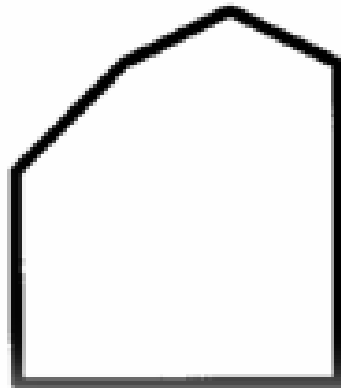
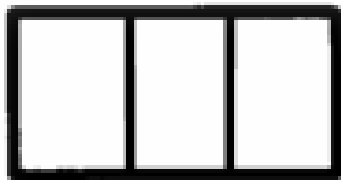
FRONT, TOP AND SIDE VIEW OF A 3D FORM



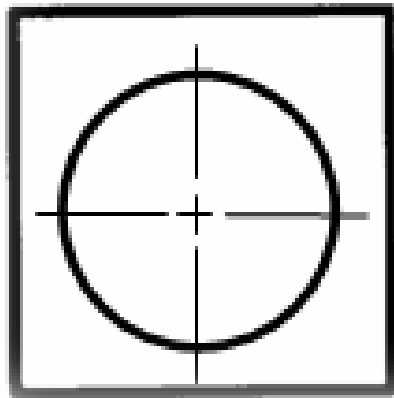
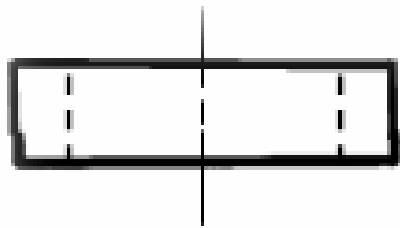
(a)



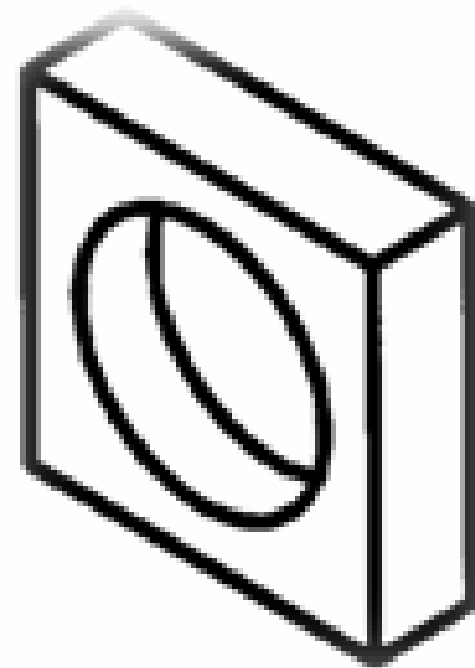
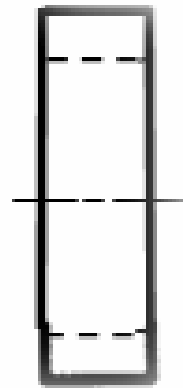
FRONT, TOP AND SIDE VIEW OF A 3D FORM



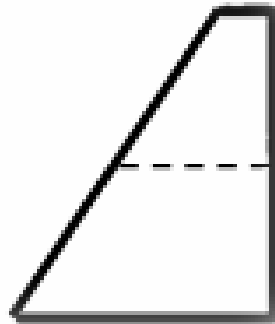
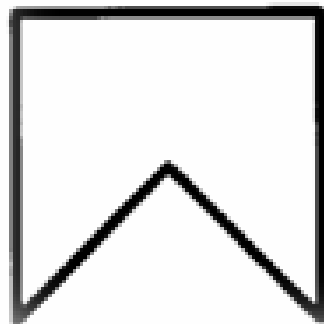
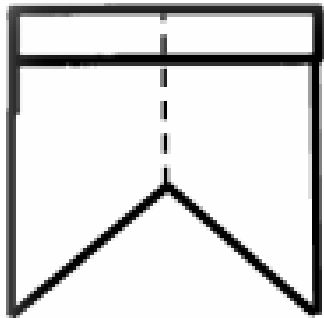
FRONT, TOP AND SIDE VIEW OF A 3D FORM



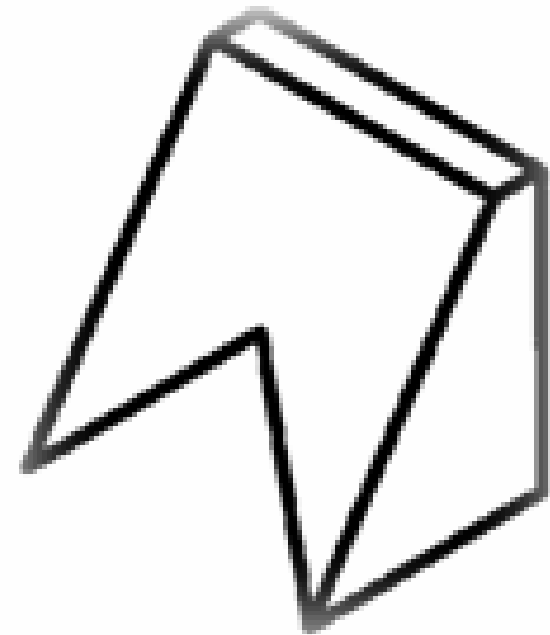
(c)

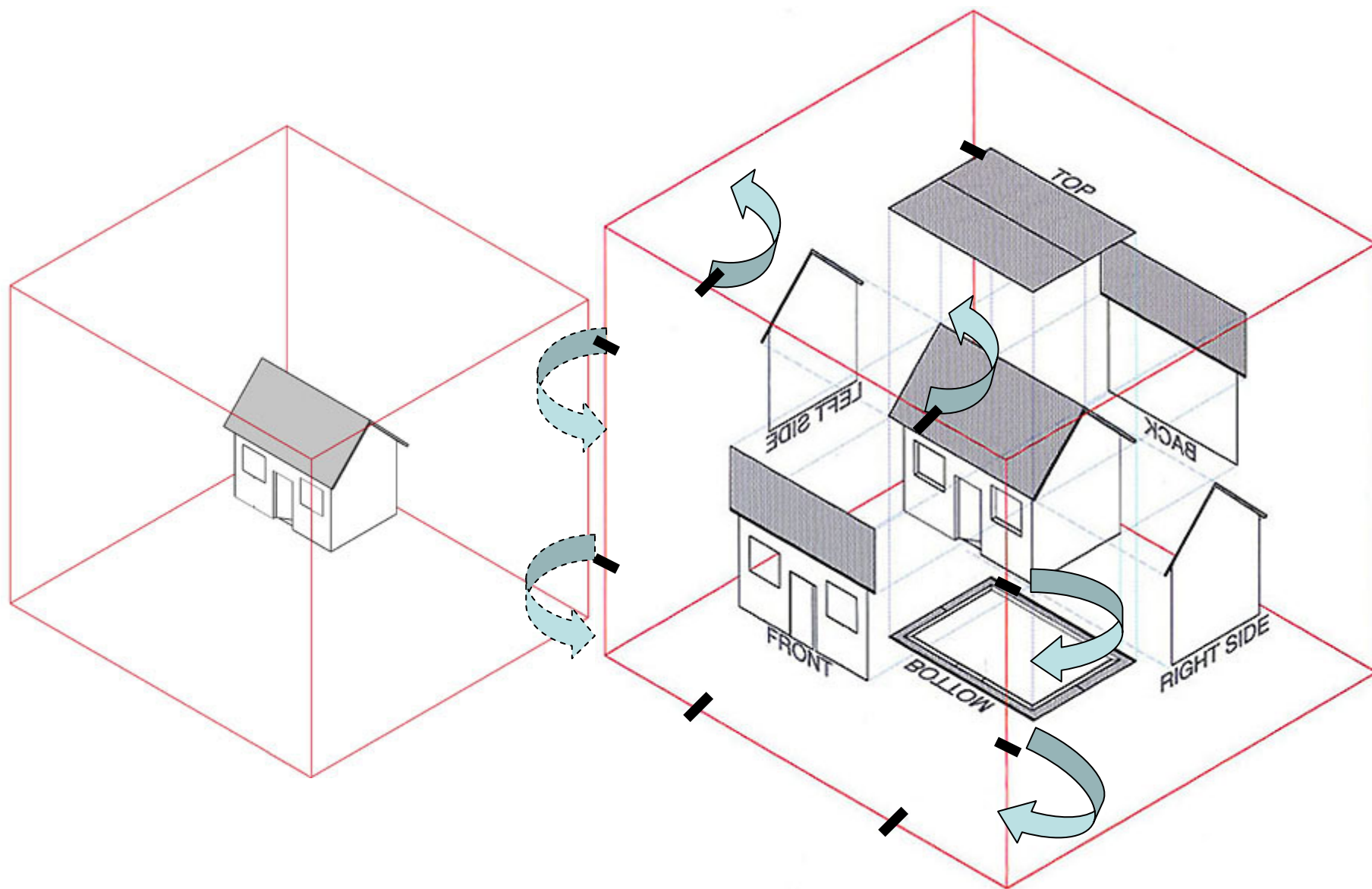


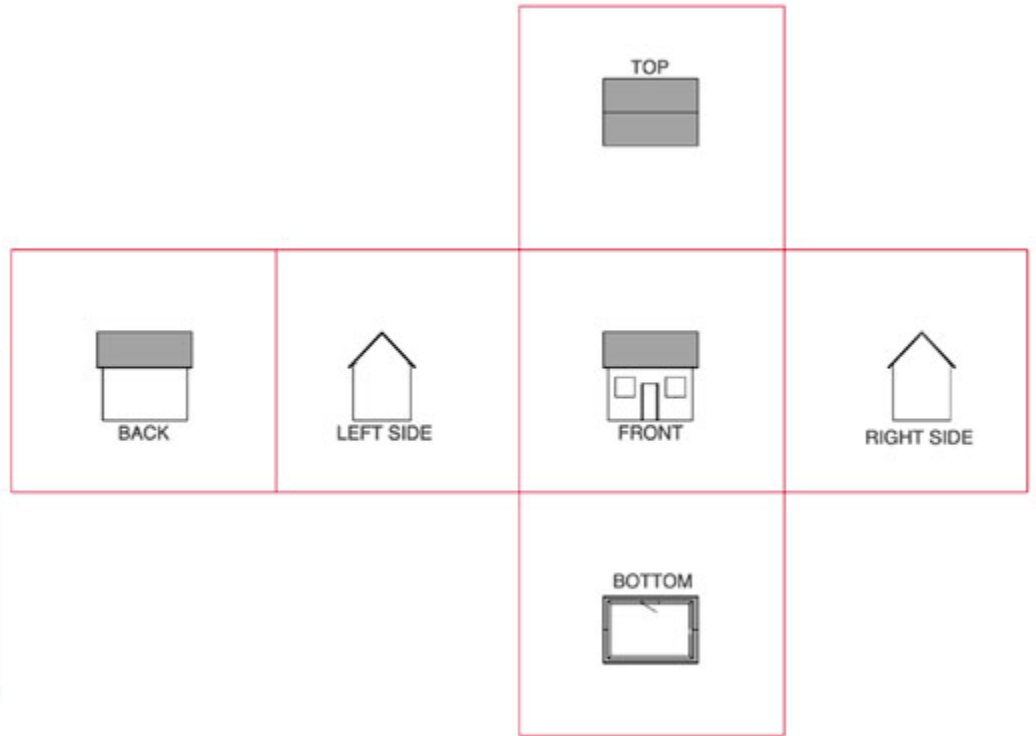
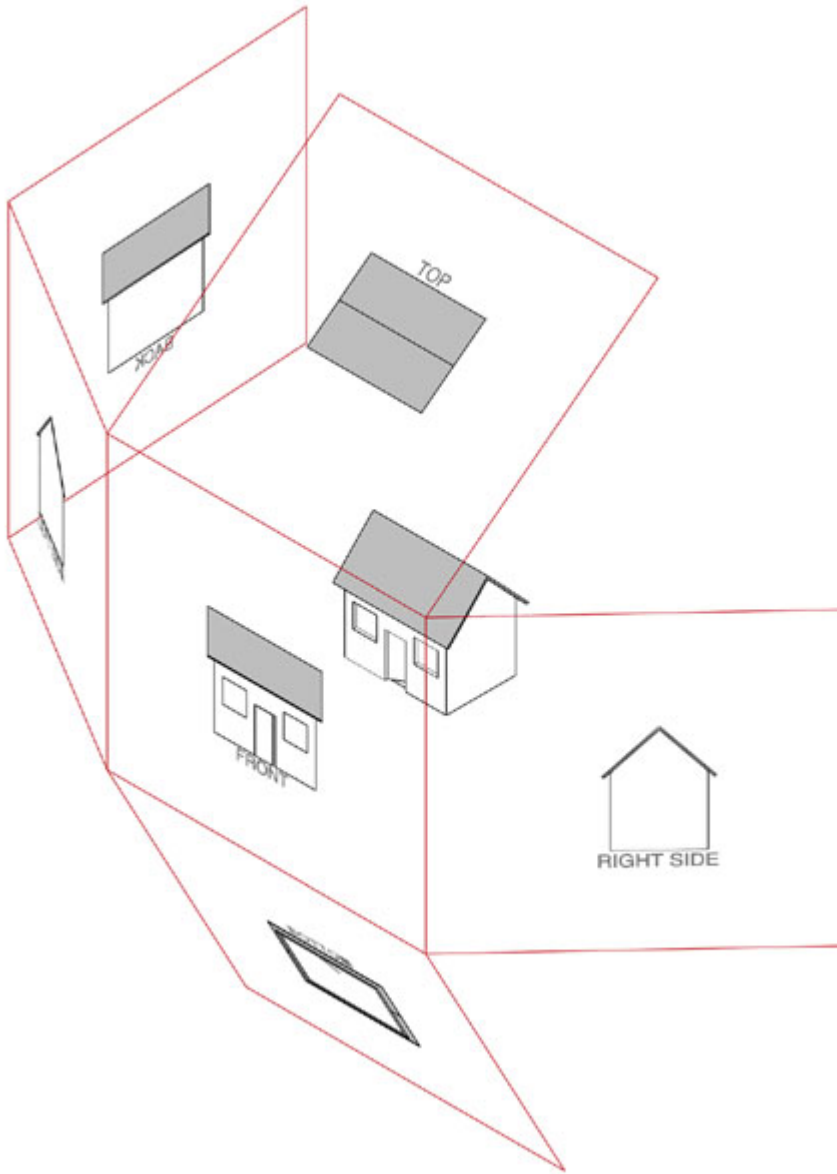
FRONT, TOP AND SIDE VIEW OF A 3D FORM

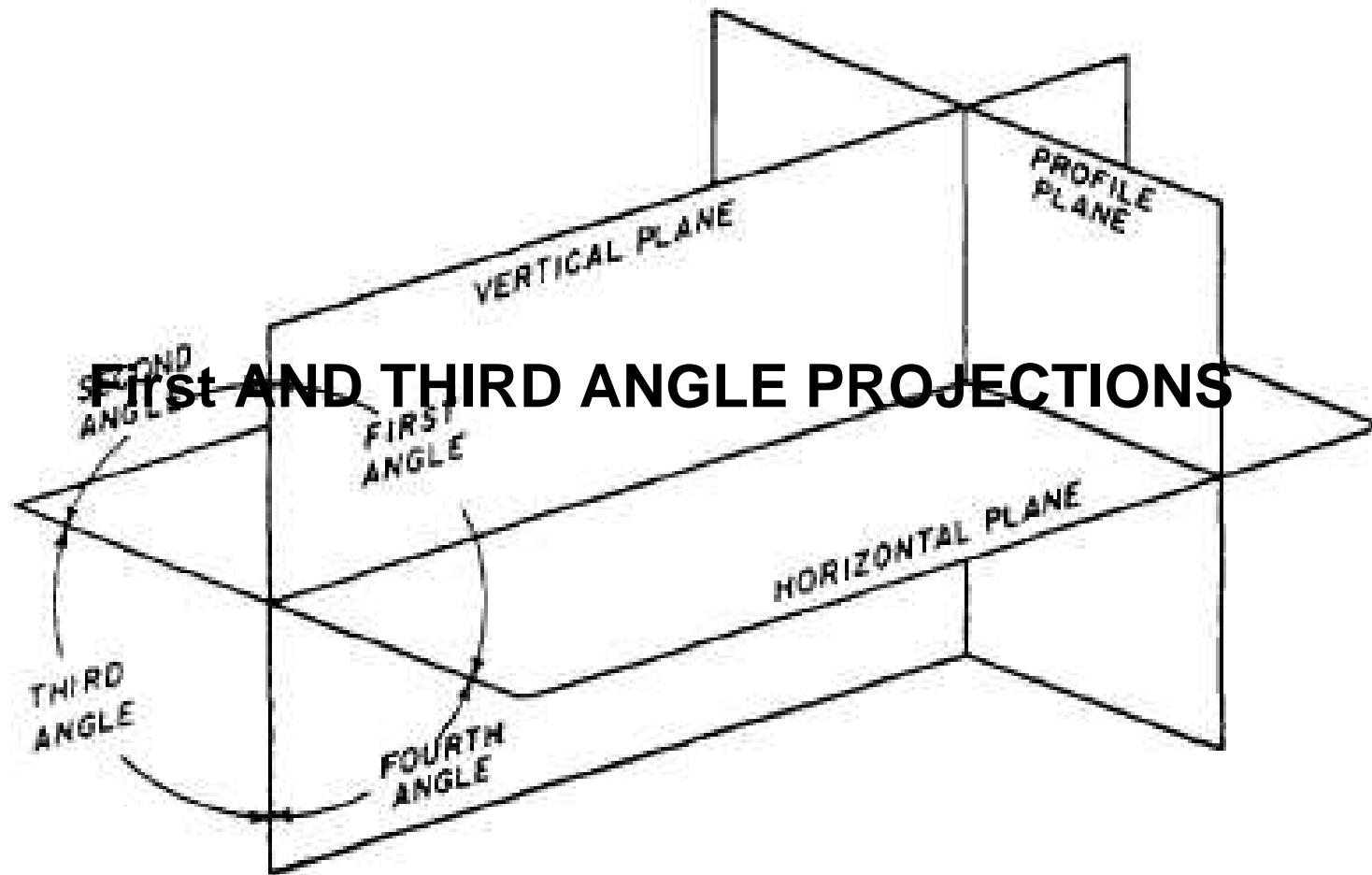


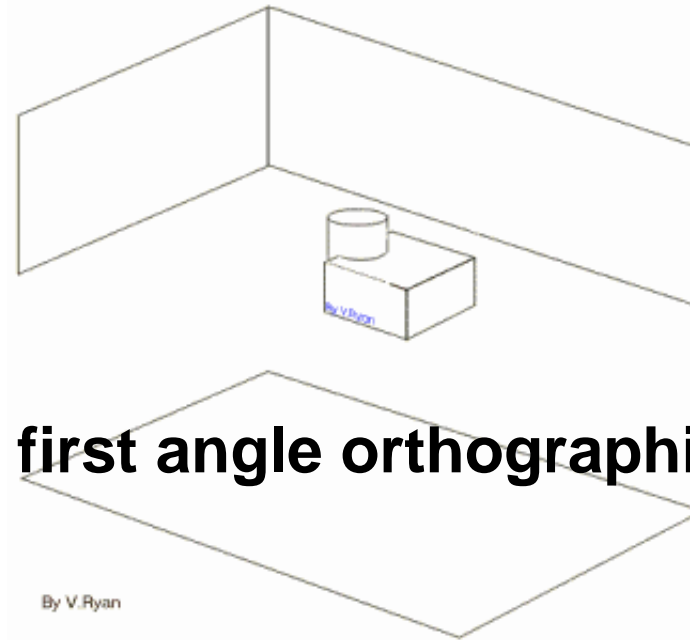
(d)



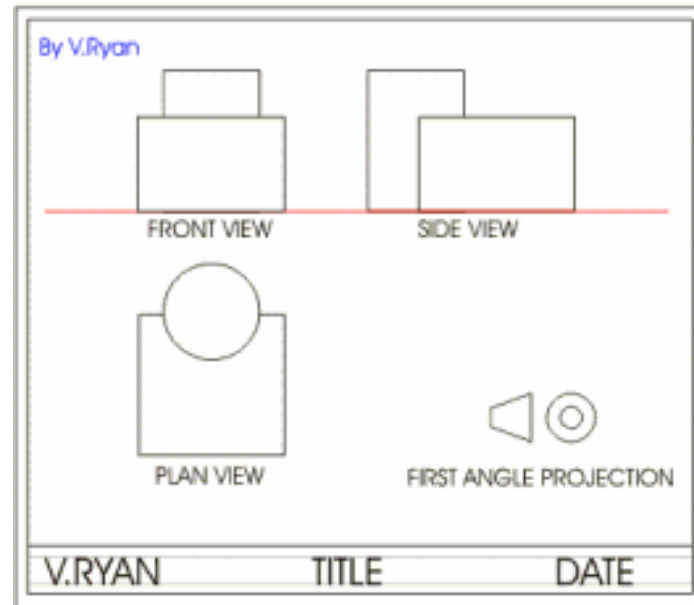


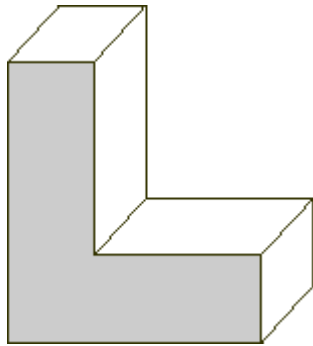




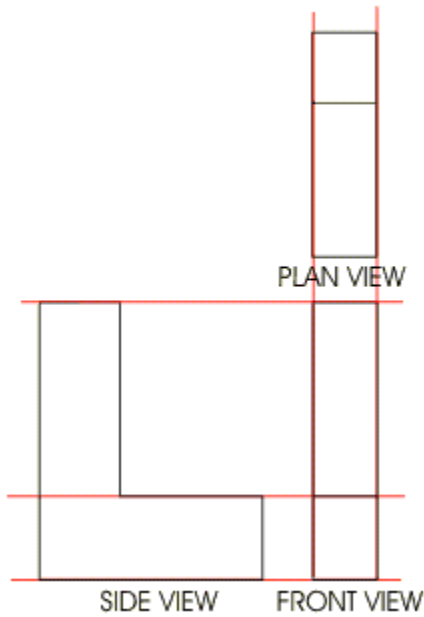


example of first angle orthographic projection

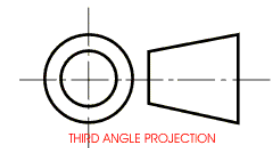
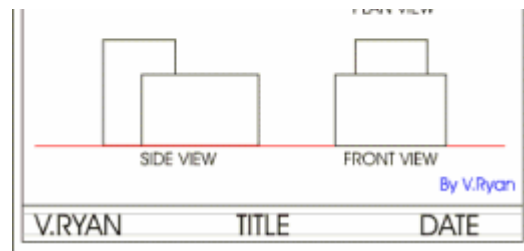
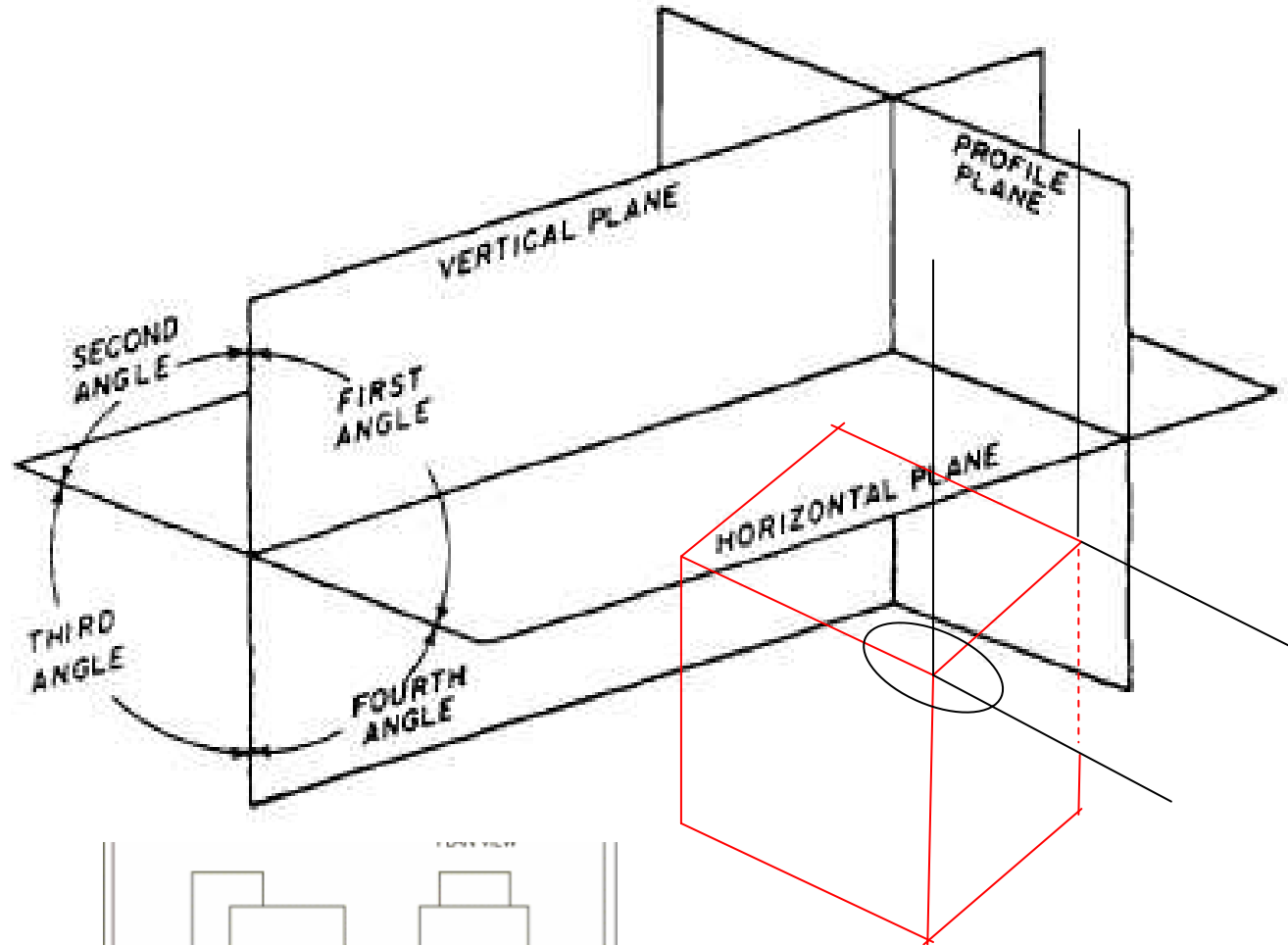




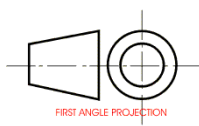
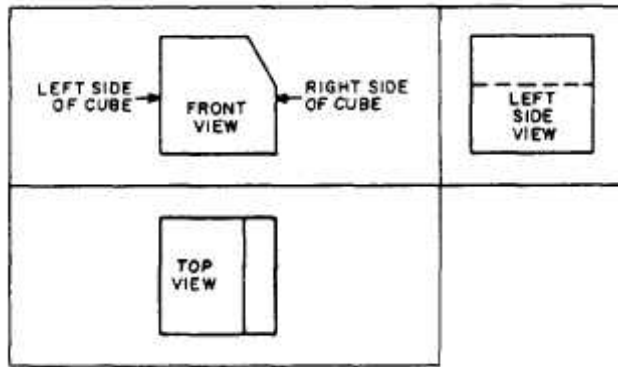
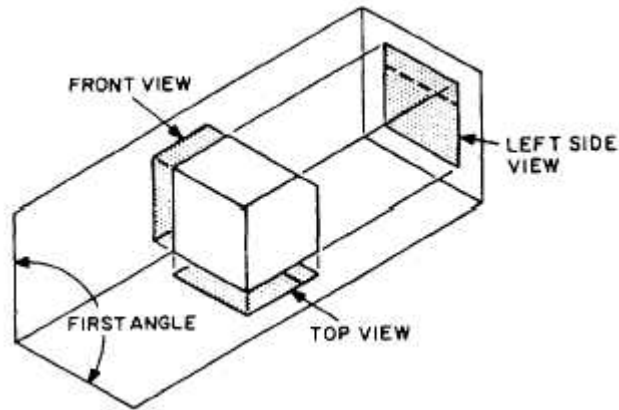
3D L Shape



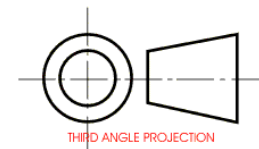
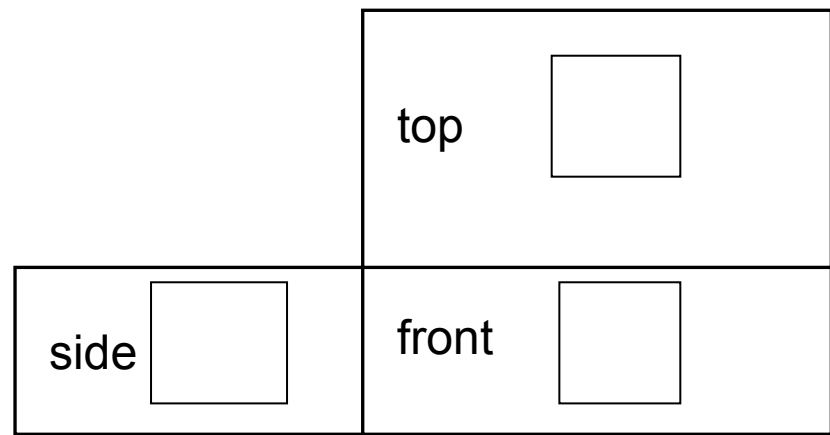
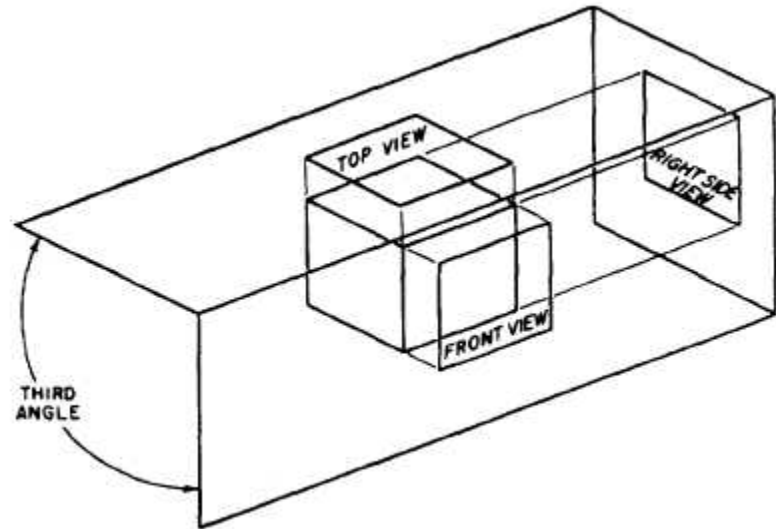
The shape drawn in orthographic projection



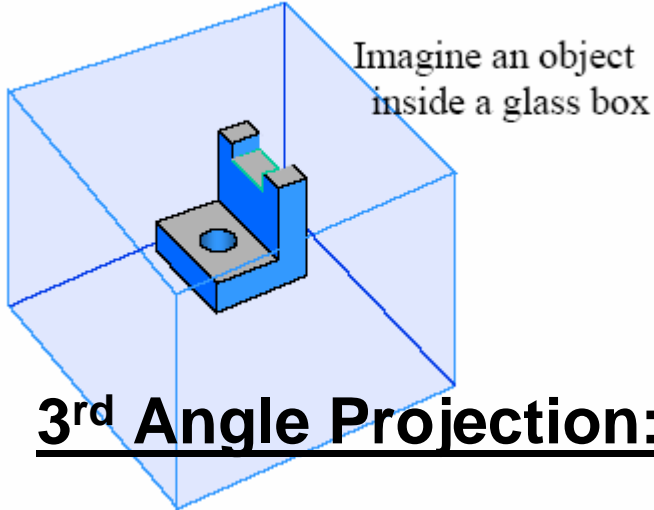
FIRST ANGLE PROJECTIONS



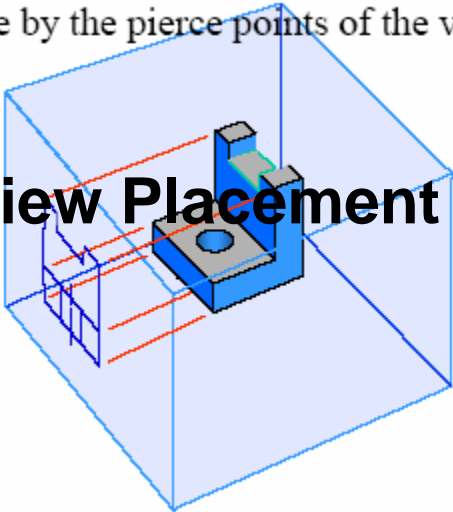
THIRD ANGLE PROJECTIONS



Orthographic Projection

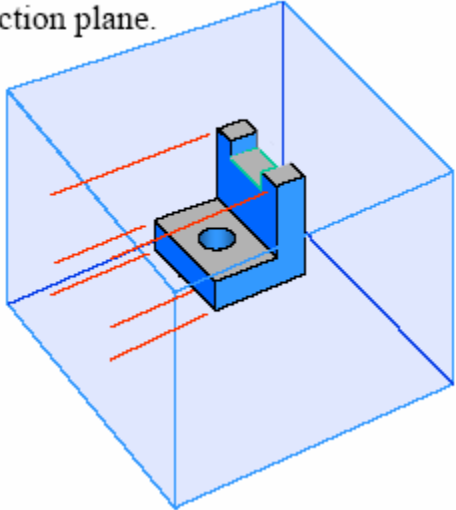


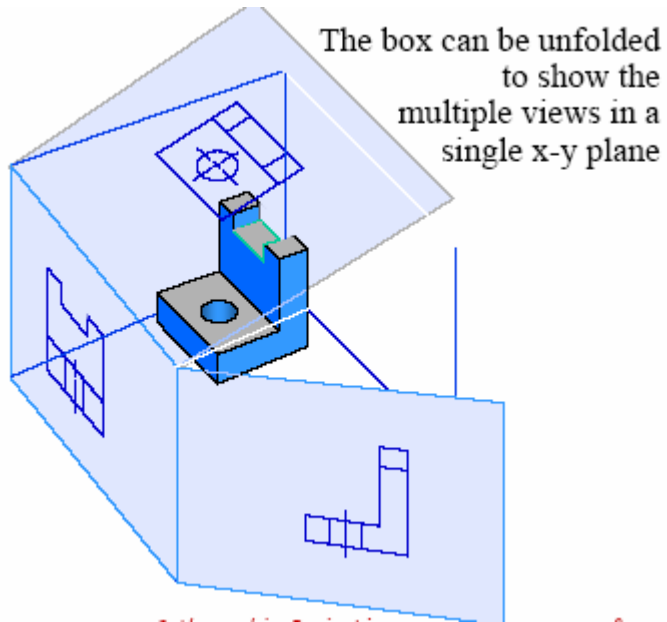
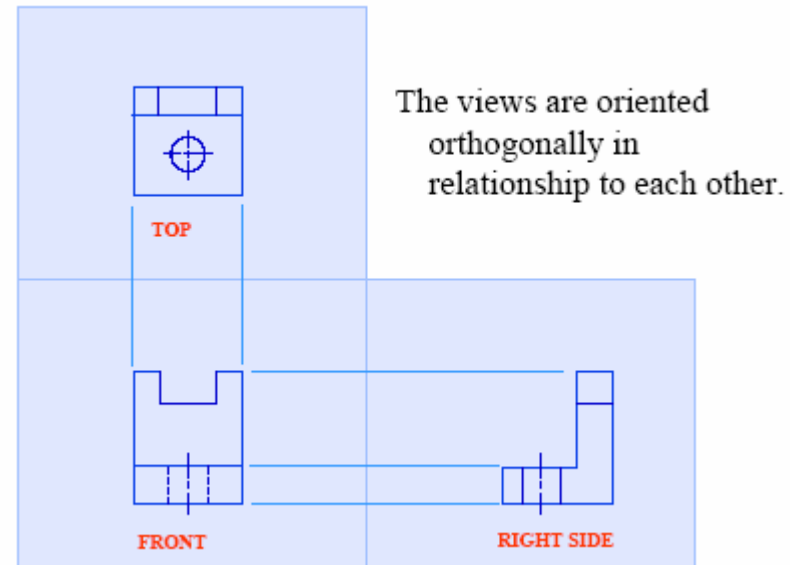
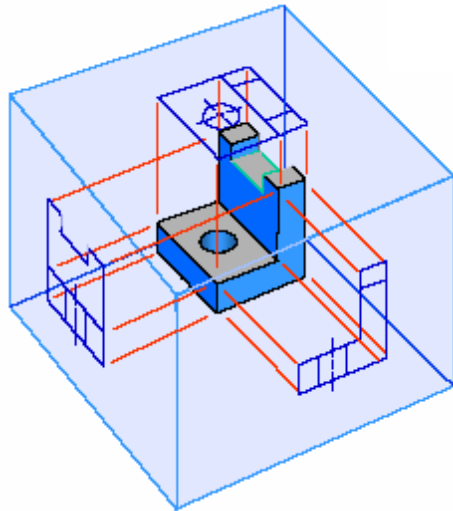
The object's image is formed on the projection plane by the pierce points of the visual rays.



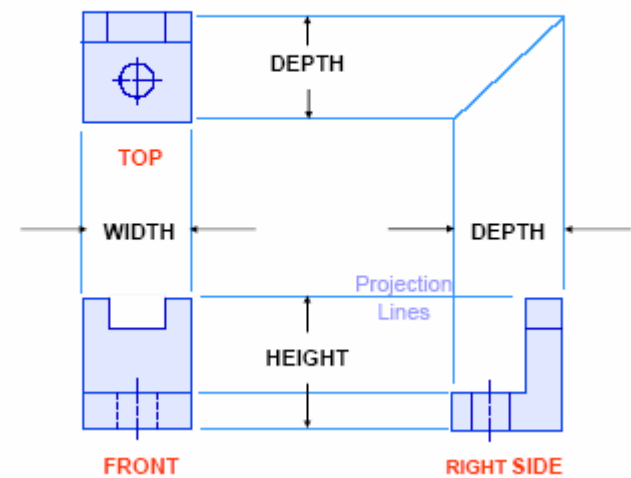
3rd Angle Projection: Three View Placement

Parallel visual rays project from the object to the projection plane.

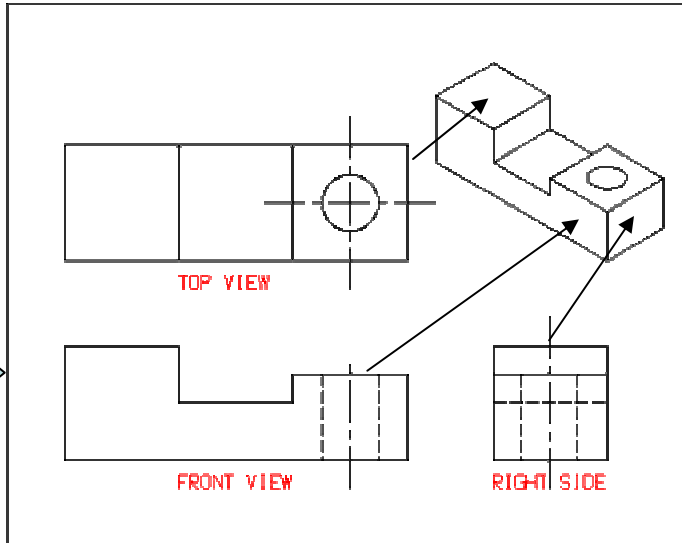
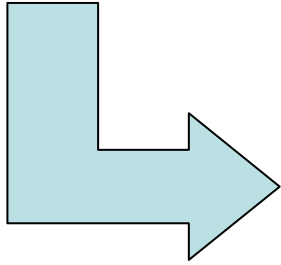




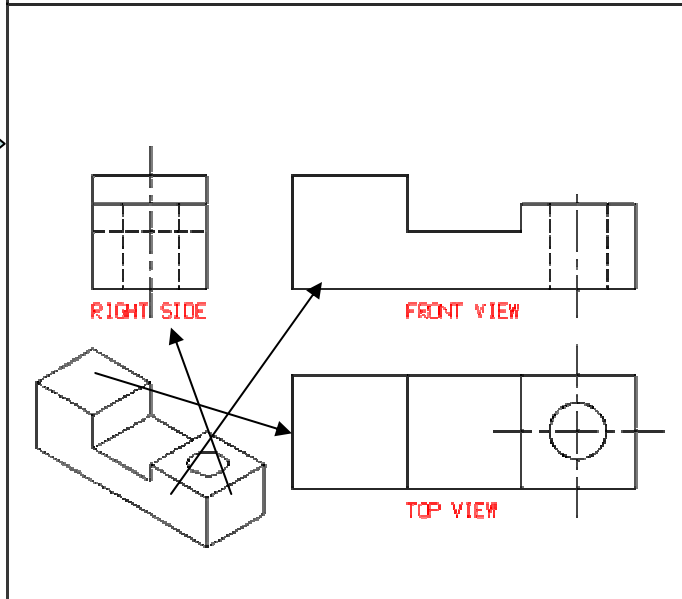
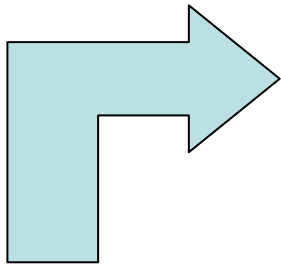
Typical Three-View Placement



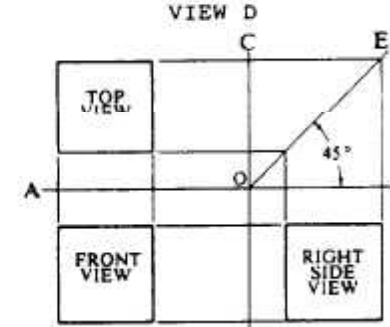
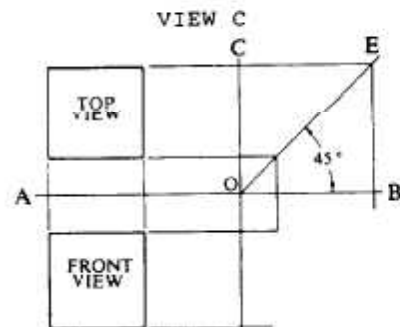
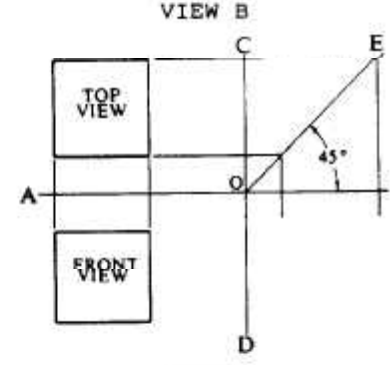
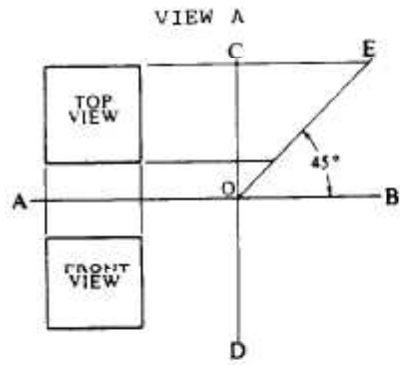
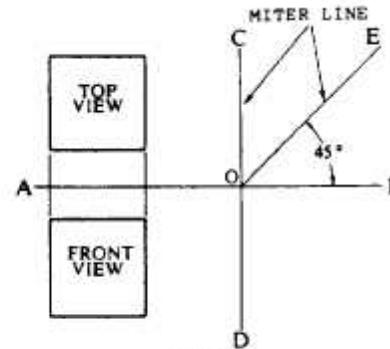
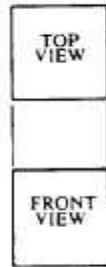
THIRD ANGLE PROJECTIONS



FIRST ANGLE PROJECTIONS



DRAW THE THIRD VIEW



ثم بحمد الله