

PENANG SANGAM HIGH SCHOOL

P.O.BOX 44, RAKIRAKI

WEEK 9 WORKSHEET

Subject: Basic Technology

Year/Level: 10A,B,C,D

Strand	BT10.5 GEOMETRICAL DRAWING
Sub Strand	BT 10.5.2 3D DRAWING
Content Learning Outcome	BT10.5.2.1 Develop skills in complex pictorial drawings in isometric, cabinet oblique and two-point perspective and convert orthographic drawings into pictorial drawings.

LESSON NOTES

OUTCOME

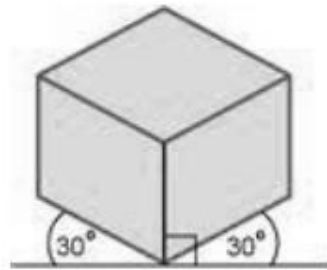
After studying this chapter students should be able to:

- Recognize and develop skills in pictorial projection.
- Acquire added concepts in pictorial projection.

INTRODUCTION

The word construction in geometry has a very specific meaning: the drawing of geometric items such as lines and circles using only compasses and straightedge or ruler.

3D DRAWINGS



ISOMETRIC



OBLIQUE



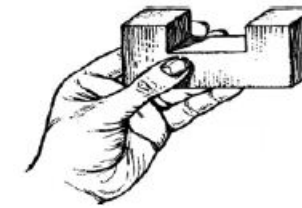
PERSPECTIVE

PICTORIAL DRAWING

Pictorial sketches often are more readily made and more clearly understood than are front, top, and side views of an object. Pictorial drawings, sketched freehand or made with drawing instruments, are frequently used by engineers and architect to convey ideas to their assistants and clients.

OBLIQUE DRAWING

The oblique method of drawing is the simplest method that can be used to draw objects pictorially. Oblique drawings of objects are easily recognized because surfaces directly in front of the observer are viewed orthographically.

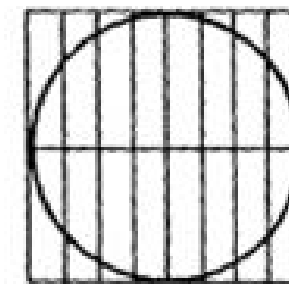


In an **oblique drawing**, a circle on the surface parallel to the plane of projection will appear as a circle. A circle on any other surface will appear as an ellipse.

Ordinate Method

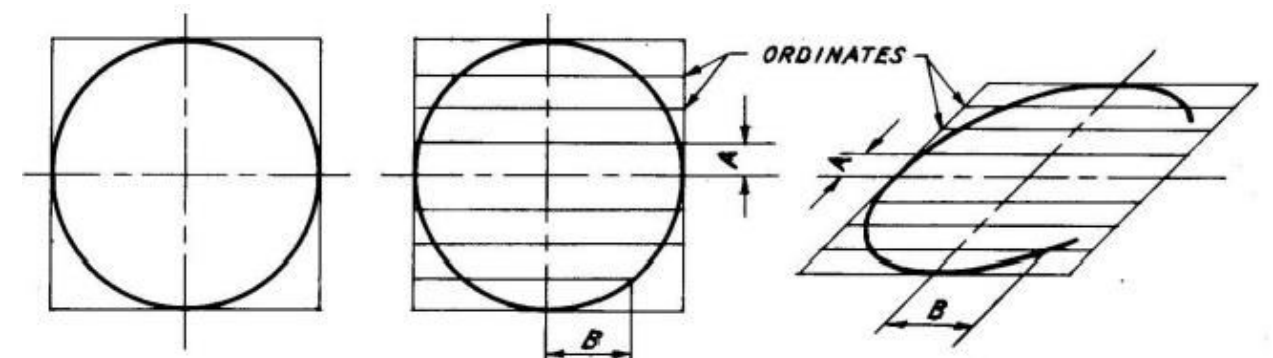
STEPS:

1. An oblique square of side equal to the circle diameter is drawn depending on the position of the circle.
2. Another similar square is drawn as an auxiliary view with a circle inscribed. Here ordinates are taken not necessarily at equal intervals.



Auxiliary View

3. The same ordinates are now drawn obliquely on the oblique square.
4. The length of each intercepting ordinate is transferred from the auxiliary view to the oblique square until the whole circle is formed.
5. Freehand join all the points smoothly.



STUDENT ACTIVITY

Given: Orthographic views of a shaped block in 1st angle projection

Required: Using the given dimensions, draw the shaped block in OBLOQUE drawing. You may take the measurements from the drawing. Use 'O' as your starting point.

