PENANG SANGAM HIGH SCHOOL

P. O. BOX 44, RAKIRAKI

LESSON NOTES - 12

SCHOOL: <u>PENANG SANGAM HIGH</u>　　　　　SUBJECT: <u>TECHNICAL DRAWING</u>　　　　　YEAR/ LEVEL: <u>13 C/D</u>

Strand	TD13.1 GEOMETRY
Sub - Strand	TD13.1.1 Plane & Space Geometry
Content Learning Outcome	TD13.1.1.1 Determine the point view of a line and the shortest distance between two Skew lines.

SKEW LINES

Learning Outcomes
By the end of this topic, students will:
a) identify the true length, point view and shortest distance
   between two skew lines

Finding the shortest distance between two Skew Lines.

Skew Lines: lines that do not intersect and are not parallel to each other.

STEPS
1. Project lines perpendicular to line ab to locate the TL of line ab in 1st Aux View.
2. Parallel to the perpendicular project line cd in 1st Aux View.
3. Extend the TL of ab to locate the point view of ab in 2nd Aux View.
4. In the similar manner locate line cd in 2nd Aux View.
5. Drop a perpendicular line from point view of ab to cd in 2nd Aux View to locate xy the TL of shortest distance.
6. Project y from 2nd Aux View to line cd in 1st Aux View.
7. Construct perpendicular line from y to the TL of line ab to locate x.
8. Project xy from the 1st Aux View to the plan on line ab and cd appropriately.
9. Do same for xy in the elevation.

QUESTION 1

Given:　　The plan and the elevation of skew lines ab and cd.

Required:　　To Find the shortest distance between the *Skew Lines.*