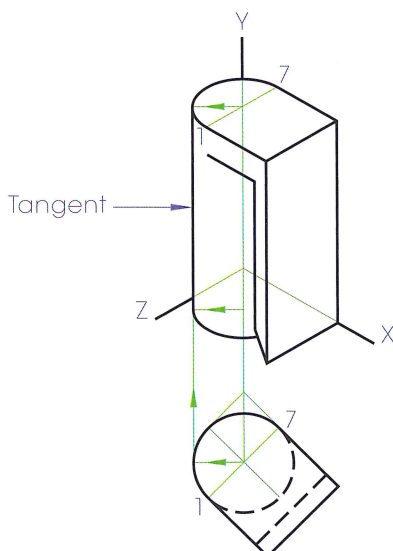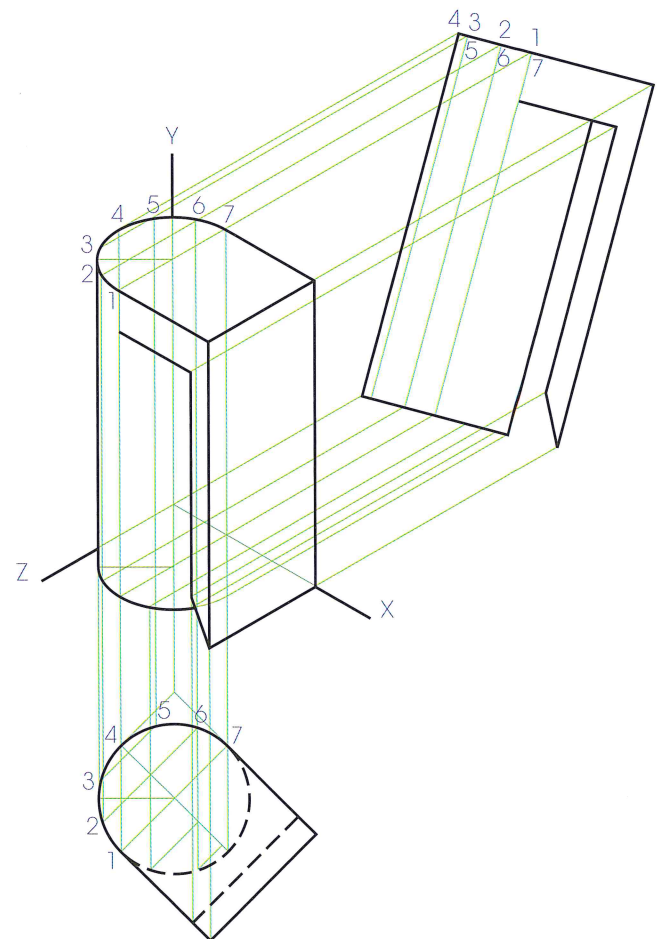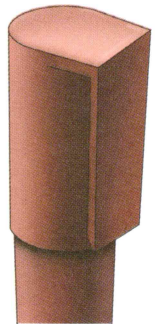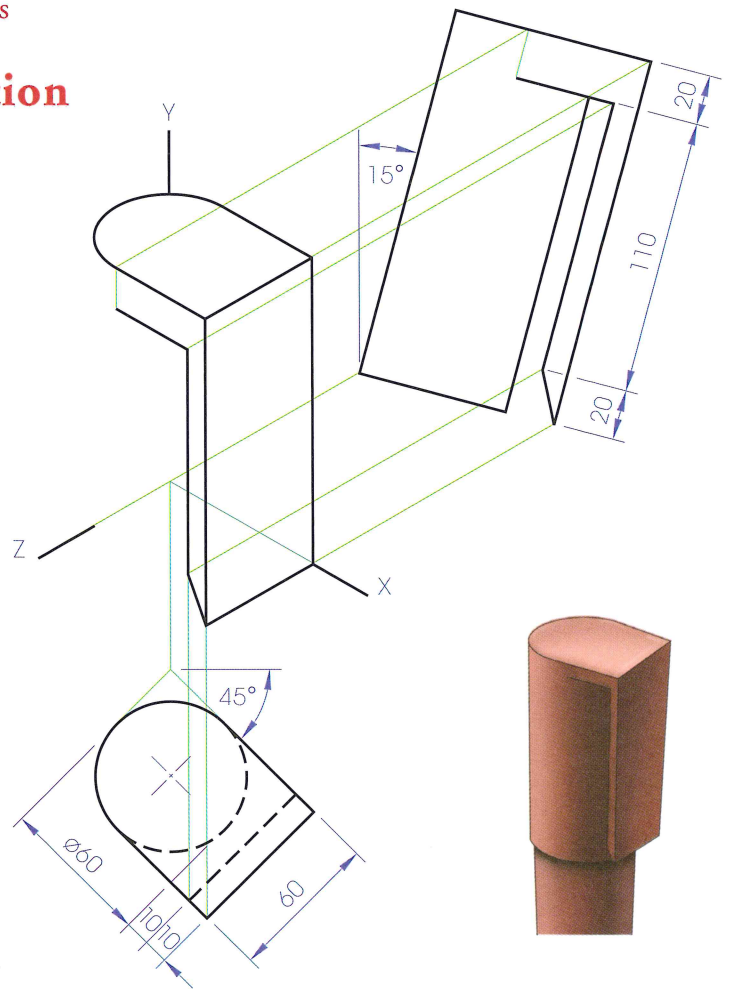# Cylinders in Isometric Projection

Example

The incomplete isometric projection of a **pen top** using the axonometric axes method is shown over. The elevation and plan are also shown in their required positions.

 (i) Draw the axonometric axes X, Y and Z.

 (ii) Draw the plan orientated at 45° as shown.

 (iii) Draw the elevation orientated at 15° as shown.

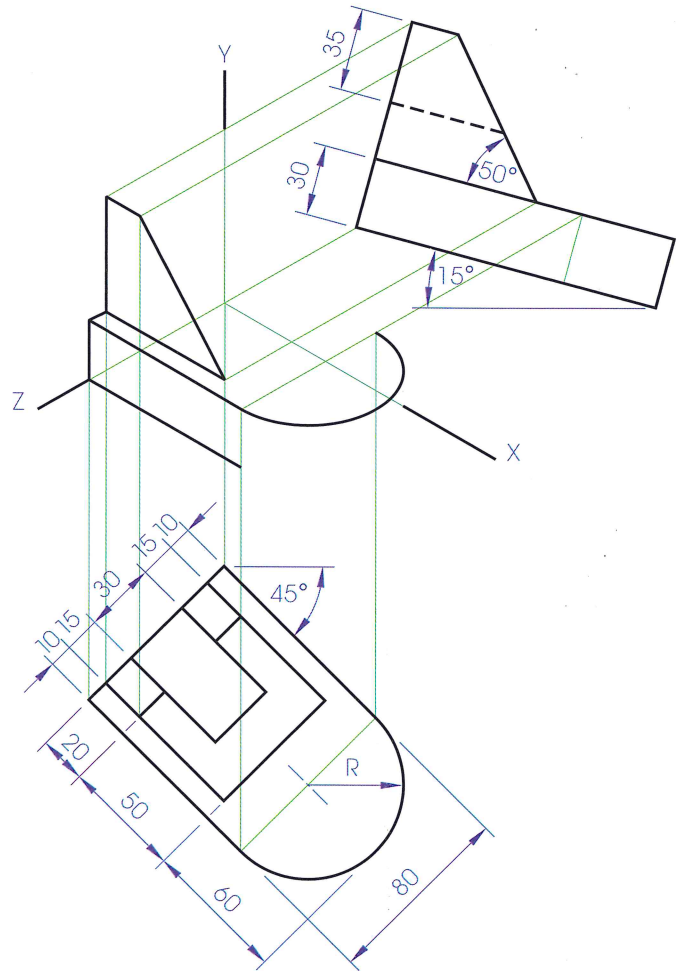 (iv) Draw the completed axonometric projection of the pen top.

1. Draw the axonometric axes, plan and elevation as shown below, right.

2. Draw the given incomplete axonometric projection in the normal manner excluding the semi-ellipse.

3. Locate additional points (2 to 6) on the semicircle in plan as shown using, say a 13 mm offset for convenience.

4. Locate these points in elevation as shown.

5. Project these points from the plan and elevation to the axonometric projection and join the points where corresponding lines meet with a smooth curve.

6. Repeat this process for the bottom curve as appropriate.

7. Complete the axonometric projection by locating the tangent as shown below, left.

Exercises

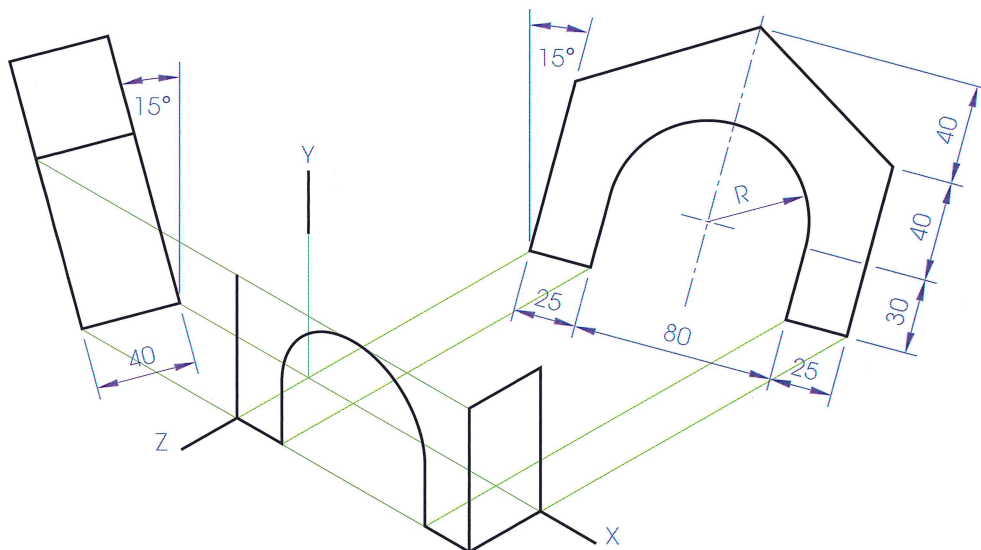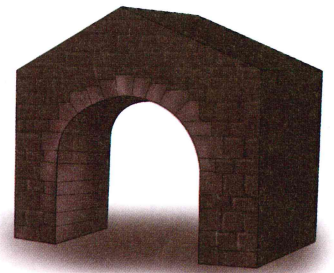**1.** The figure over shows the incomplete isometric projection of a **component** using the axonometric axes method. The elevation and plan are also shown in their required positions.

   (i) Draw the axonometric axes X, Y and Z.

   (ii) Draw the plan orientated at 45° as shown.

   (iii) Draw the elevation orientated at 15° as shown.

   (iv) Draw the completed axonometric projection.

2. The figure below shows the incomplete isometric projection of an **archway** using the axonometric axes method. The front and side elevations are also shown in their required positions.
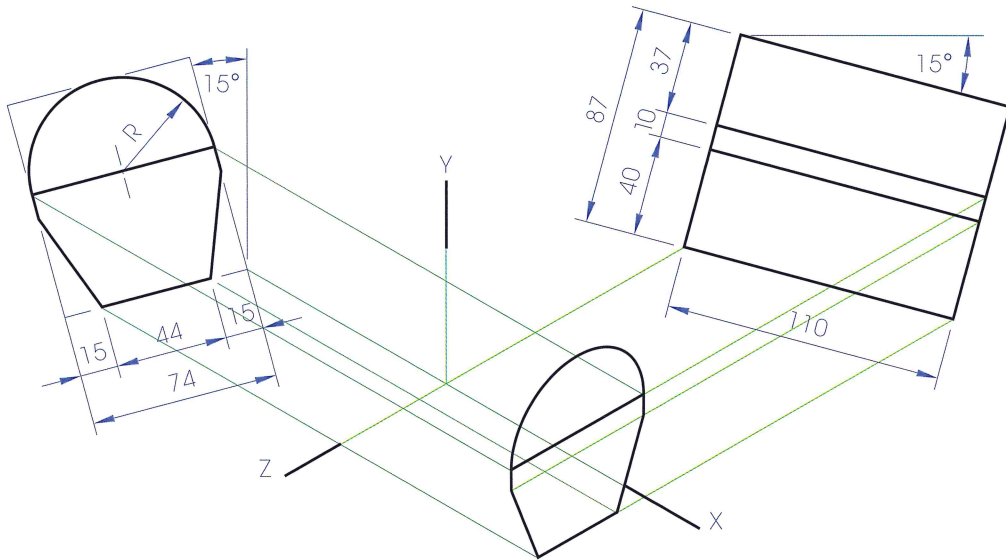
   (i) Draw the axonometric axes X, Y and Z.

   (ii) Draw the side elevations orientated at 15° as shown.

   (iii) Draw the completed axonometric projection.

3. The incomplete isometric projection of a **treasure chest** using the axonometric axes method is shown below. The front and side elevations are also shown in their required positions.

   (i) Draw the axonometric axes X, Y and Z.

  (ii) Draw the elevations orientated at 15° as shown.

 (iii) Draw the completed axonometric projection.

4. The figure over shows the incomplete isometric projection of a **whistle** using the axonometric axes method. The elevation and plan are also shown in their required positions.

   (i) Draw the axonometric axes X, Y and Z.

  (ii) Draw the plan orientated at 45° as shown.

 (iii) Draw the elevation orientated at 15° as shown.

 (iv) Draw the completed axonometric projection.