Auxiliary Views - Information Sheet 1

Auxiliary plans or elevations, are drawn when an object needs to be viewed from another direction other than the normal orthographic views. These types of views are used to show extra details or to clarify important details on the object which might not be visible on the standard views. You have already produced this type of view in standard grade, when drawing **true shapes**. These are auxiliary views of one face of an object. To find the true shape of a surface is a very common use for auxiliary projection, it allows mating parts to be manufactured and shows the true size of openings.

Work through the following steps systematically to produce the auxiliary views.

Auxiliary Plan Construction (Figure 1)

1. Look carefully at the question, to see what direction to project from. This information will be shown by an arrow on the drawing, or given as written instructions in the question.
2. From the elevation project all points where two or more lines meet at corners, or if there are curves on the object you will need to add generators and project these. You don't need to project all the lines at once, the auxiliary view can be constructed gradually.
3. Draw the datum (ground line) at **right angles** to the projection lines.
4. Draw the datum line on the plan view. **This is a common datum line, it is the same line in both views you are only viewing it at a different angle.**
5. Transfer the widths, **measuring from the datum line on the plan**, onto the appropriate projection lines in the auxiliary view. Mark these sizes onto the correct line, **measuring from the datum line,** in the auxiliary view.
6. Complete the view by lining in the visible edges with full lines.
7. Add any hidden detail. **Check the question to see if hidden detail is required.**

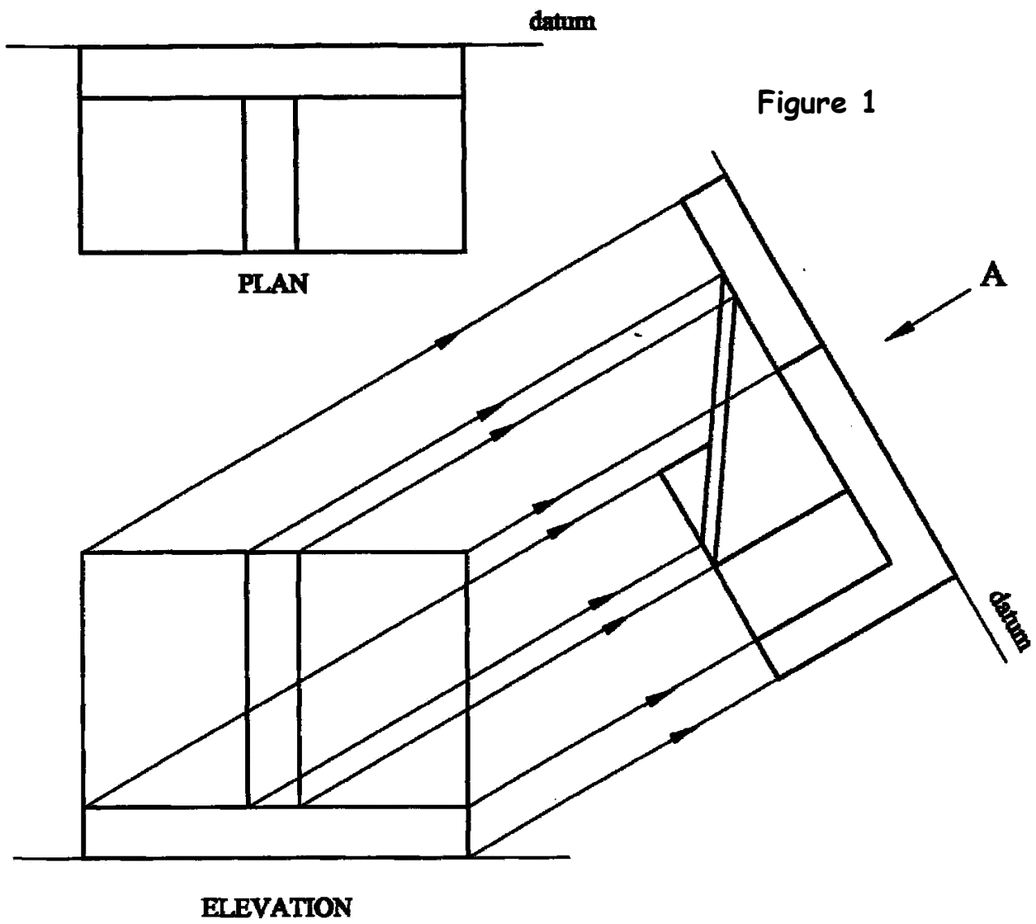

Figure 1

Auxiliary Elevation Construction (Figure 2)

You work through the same procedure to construct auxiliary elevations. However, to construct an auxiliary elevation you **must** project from the **plan view** and then transfer the appropriate **heights from the elevation** onto the auxiliary elevation. The direction of viewing will be indicated on the drawing in some way and more often than not the position of the new view will be specified for you.

Figures 1 and 2 below show the recommended method for constructing both types of auxiliary view. On the next information sheet, the same method is laid out for constructing auxiliary views, only this time all the corners of the block have been carefully numbered. Although numbering the views can take some time, it allows you to reference and check all the points between the views.

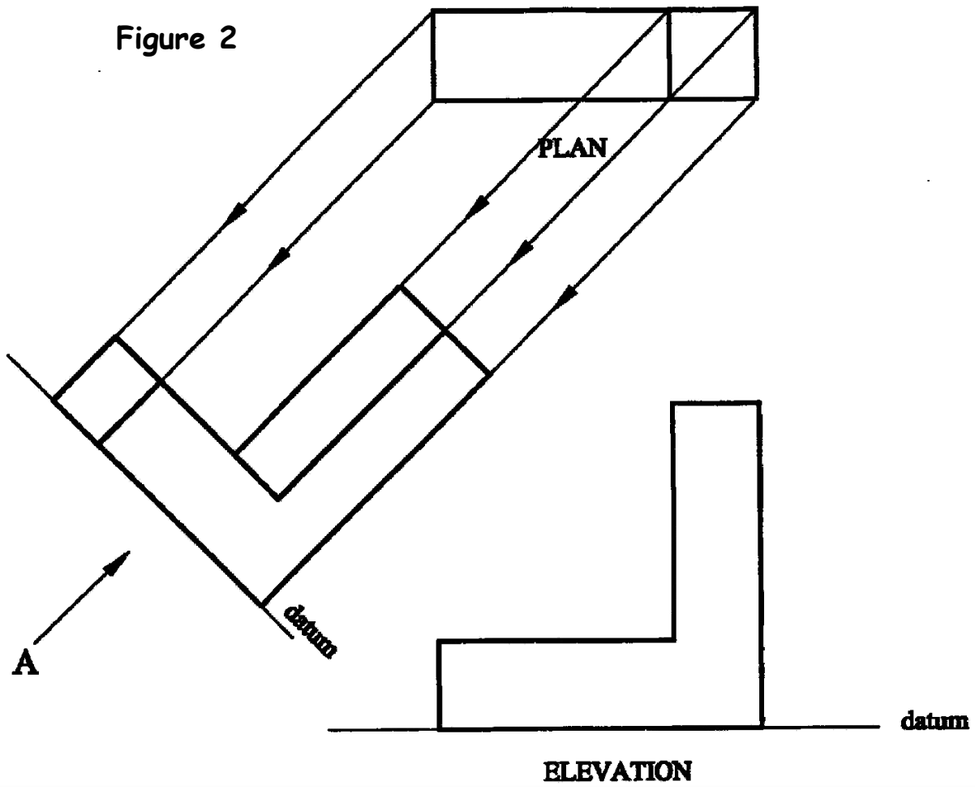

Figure 2