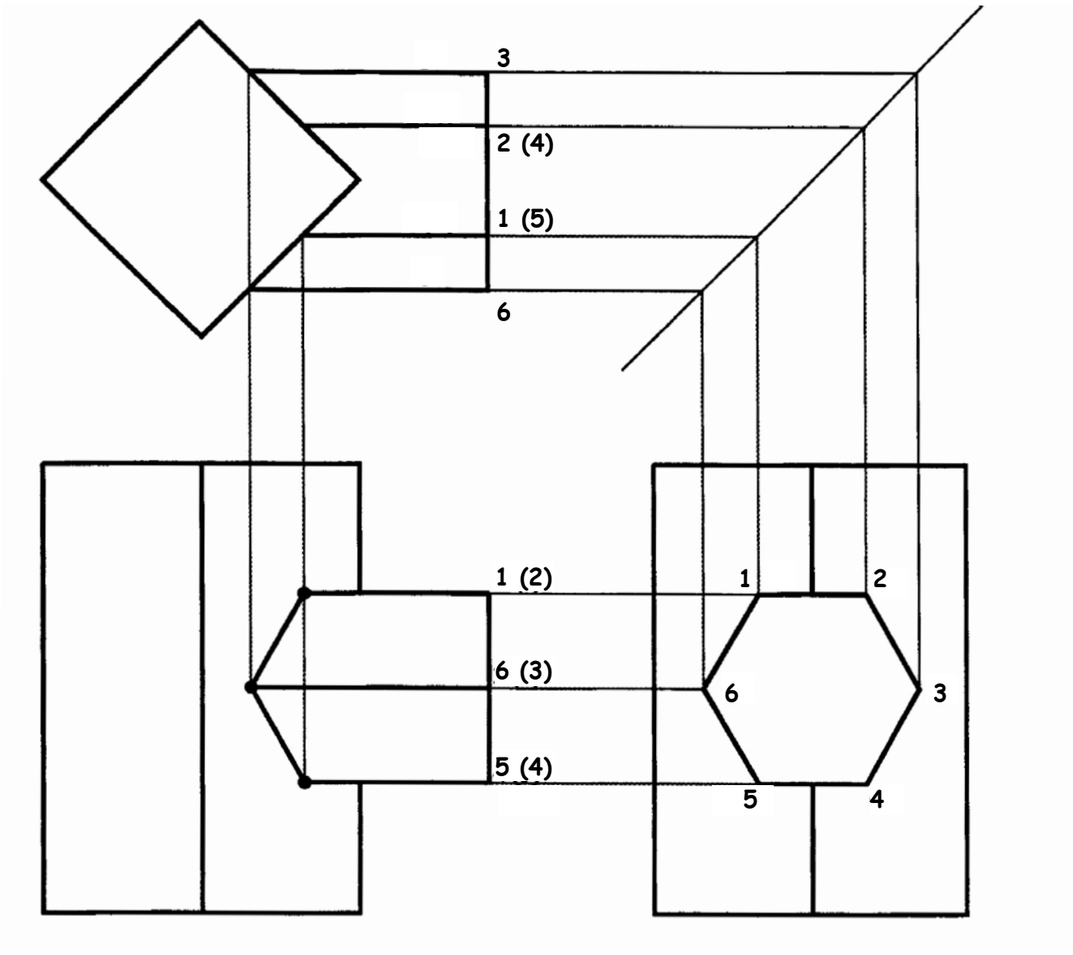
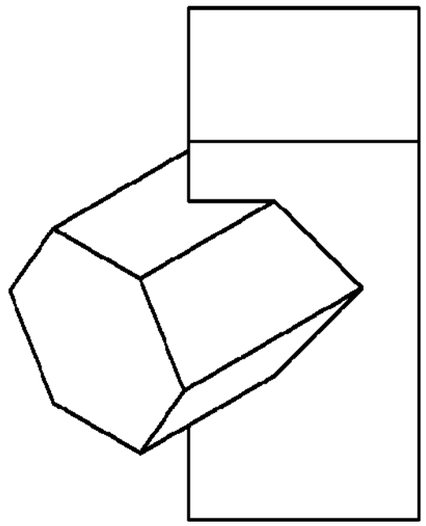
The Intersection of Prisms at Right Angles

When a combination of geometrical figures occurs, new lines are formed at their junction. These are known as *lines* or *curves* of intersection or interpenetration. When two prisms combine, the intersection formed between them will consist of straight lines. It is sometimes necessary to know the exact shape of the lines at the join, so that an accurate development of either one or both of the prisms can be drawn. This is required if the pieces are to be joined together, particularly by welding. These types of drawings would be used in the production (or maintenance) of drainage systems, air conditioning/ventilation installations or for dust extraction systems.



A Hexagonal prism meeting a square prism at right angles

In the example shown, the plan shows where all the corners of the hexagonal prism meet the square prism. These points are then projected down to the elevation where they meet projection lines from the same corners taken from the end elevation. Look carefully at the numbers on the views, these will show you how the lines of intersection should be joined.



Pictorial view of the intersection of the prisms