

Orthographic 6.5

Calculating True Lengths

There are two ways of calculating true lengths; the Right Angle Triangle Method and the Compass Method.

Right Angle Triangle Method

Fig 6.5a shows a line inclined at 30° to the projection plane in plan and at 45° to the projection plane in elevation.

To calculate the lines' true length measure the distance (d) that 2 is from the projection plane in plan (fig 6.5b). Then in elevation project a right angle from 2 and transfer the distance (d) from plan on to this line to give you $d1$. Line 1-2a is a true length.

Conversely (6.5c) transfer d from elevation to plan to form distance $d1$ on line 2-2a. Line 1-2a is a true length.

