

Example:

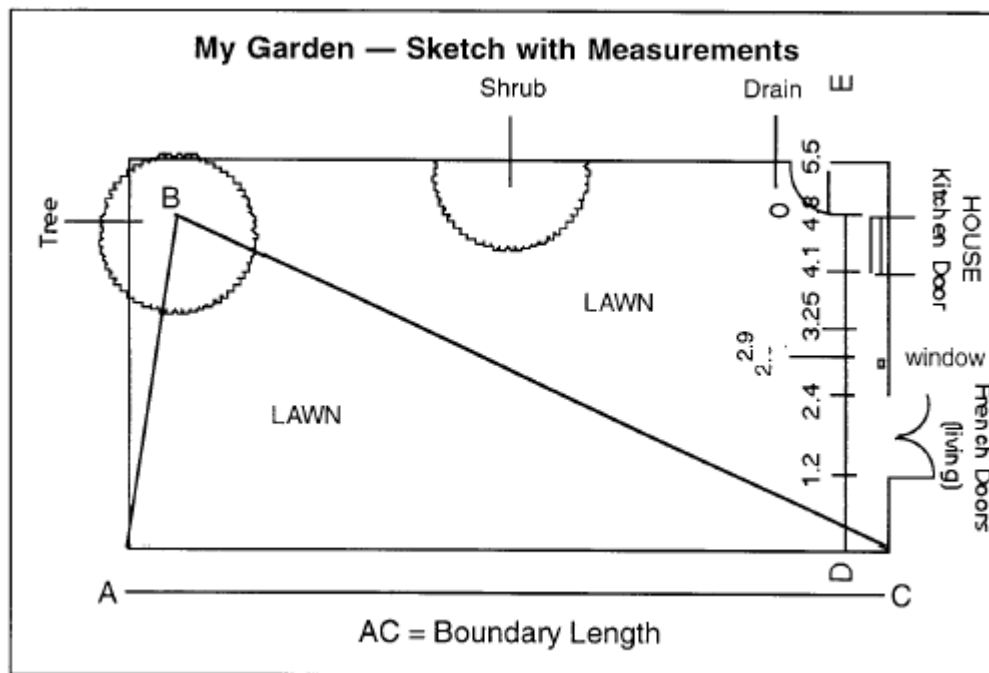
Circle (1) $A = 3.14 \times r^2$

Rectangle (2) $A = b \times h$

Square (3) $A = b \times h$

To enable you to prepare accurate scaled plans for the garden you will need to prepare a rough outline to work to, so sketch out the garden first and note all distances. For more detailed areas use another sheet of paper for that area.

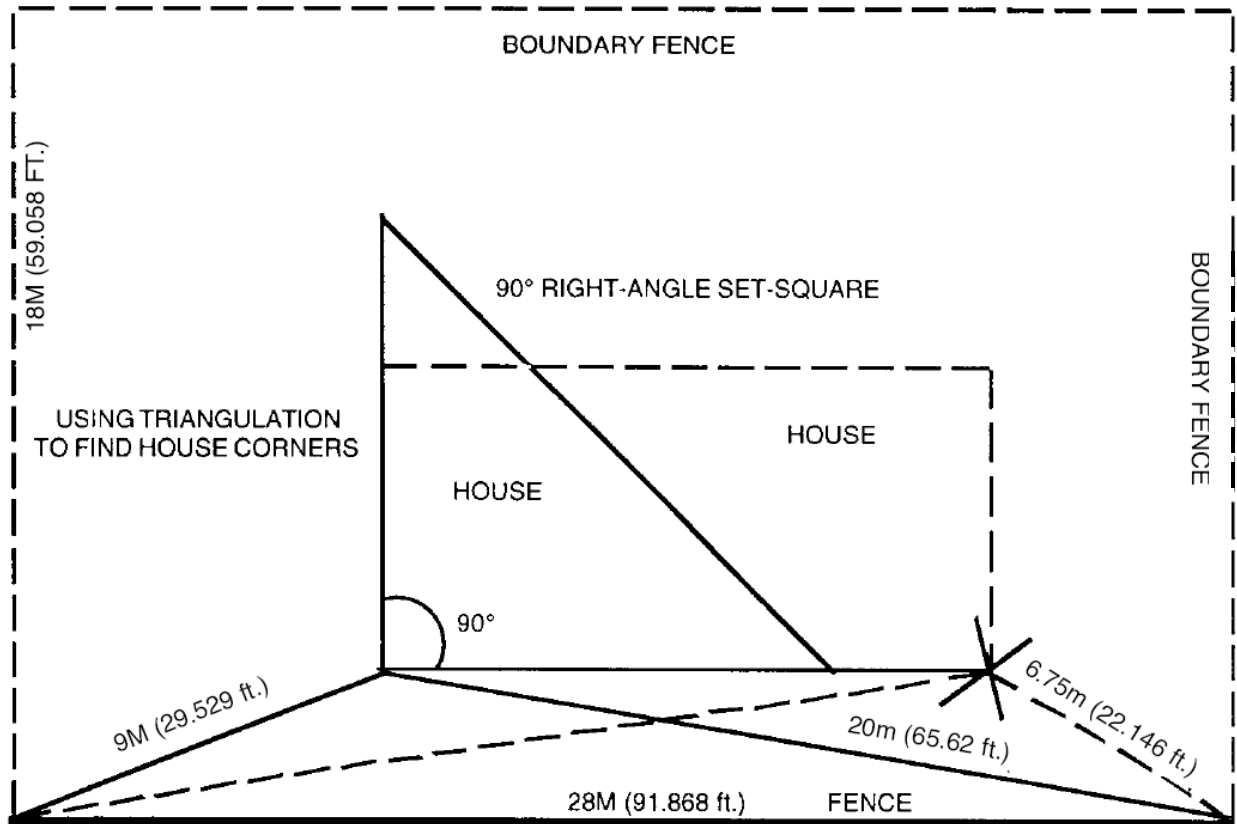
To make life easier, don't try to measure the back and front garden at the same time. Start from the house and measure to the boundaries. Measure the diagonal distances as well as the length of each fence as these will enable you to pinpoint corner and, later, other features.



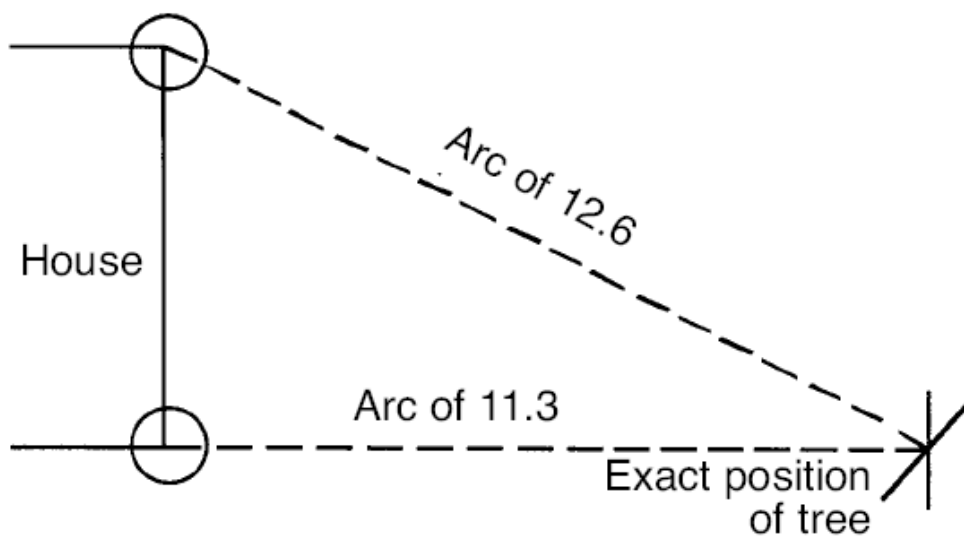
This method is called triangulation and this will prevent your plan looking lopsided. Measure the position of windows and doors in the house so that you have an accurate idea of how house and garden relate. Mark and measure access grates, electricity connections (including underground cabling), sewerage and underground watering systems, storm drains, trees, driveways, swimming pools, steps and stairs. In fact anything that will affect your overall design. Having noted all the existing elements, you should also note whether they are to be retained, modified or discarded.

TRIANGULATION

Triangulation involves taking measurements from two known points (the ends of the house, or the corner of the house and garage, is often ideal) to the object in question.

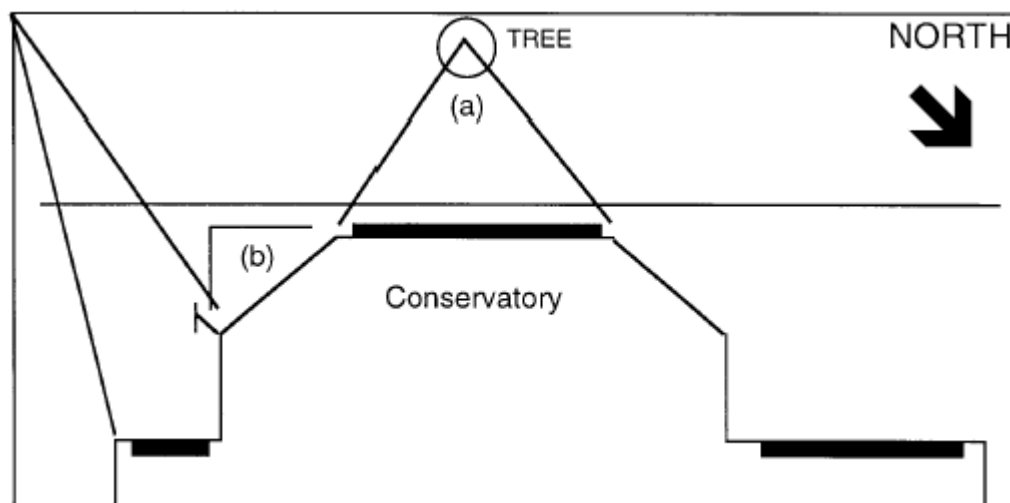


Using Triangulation to find house corners



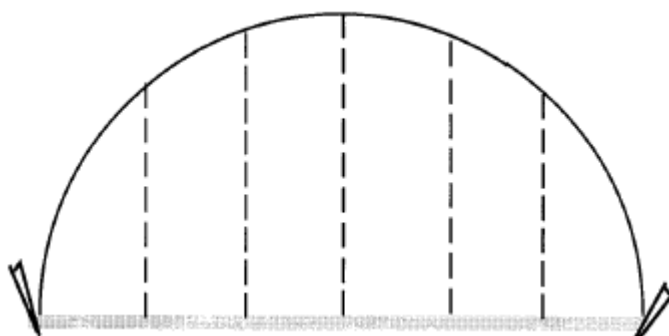
Triangulation can be used to fix the position of a tree or angled boundary by taking measurements from two known points and then transferring them to a scale drawing, using a compass to swing two intersecting arcs. Where these meet is the exact position of the feature concerned.

For example, mark a tree roughly on your drawing. Measure it from two known points, such as the corners of the house and record them on your sketch. When you later come to make a scale plan, set a pair of compasses to the first measurement. Position the point on the house corner, and draw a short arc. Then repeat for the second measurement. The point where the two arcs intersect indicates the position of tree.



MEASURING A CURVE

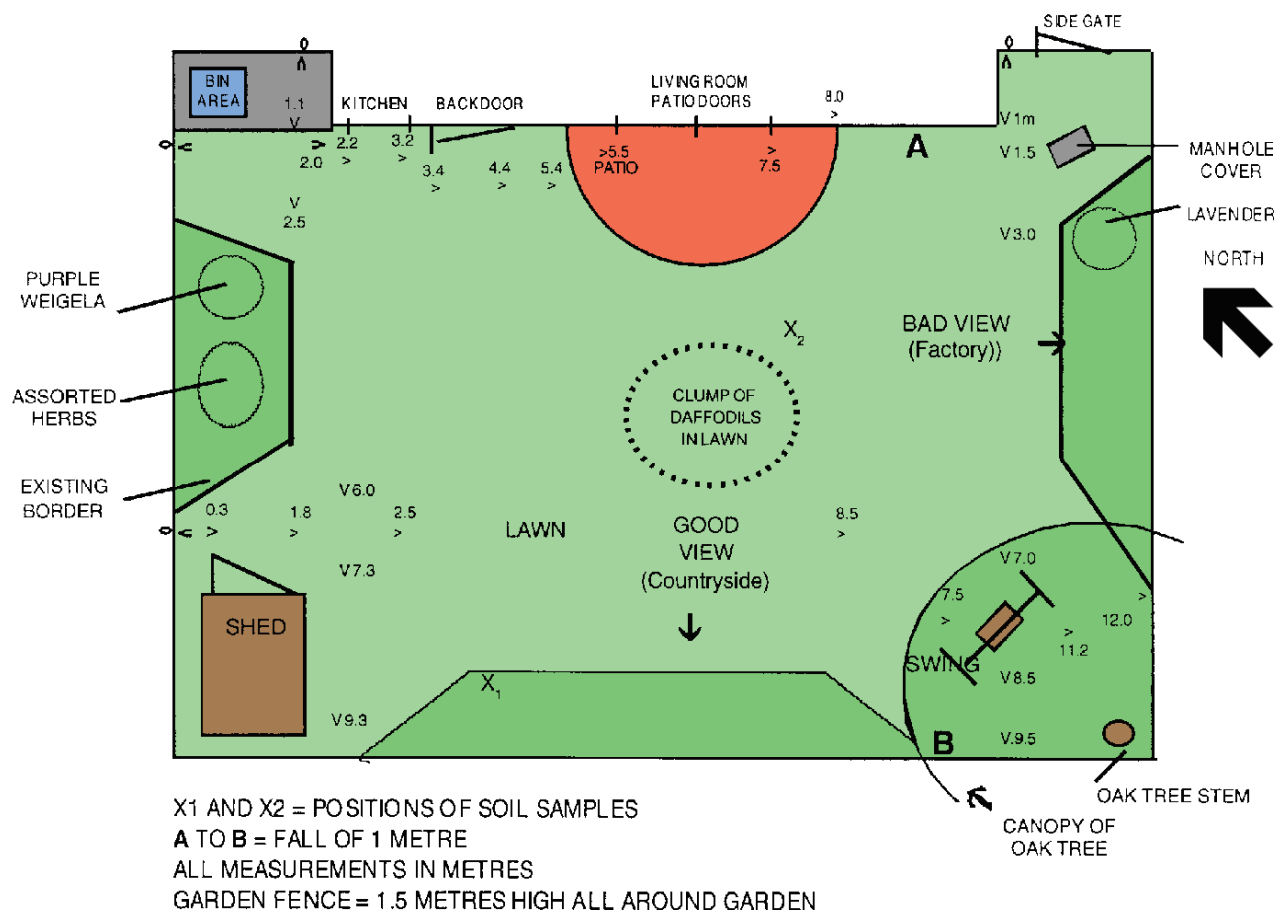
The technique used for accurate measurement in this situation is quite simple. First plot two ends of the boundary or wall concerned, using triangulation if necessary.



Take your reel of garden twine attached to your pegs and stretch this from one end to the other. Starting at one end, take a measurement at right angles from the line to the boundary at 1 metre intervals, clearly noting each measurement on your survey drawing.

These distances are known as “offsets”. When these offset measurements are linked up, the curve of the boundary or the wall will be reproduced. Later it will be a simple job to plot them to scale and this will clearly indicate a curve. This same technique may be used for other irregular shaped borders.

Example Garden Sketch

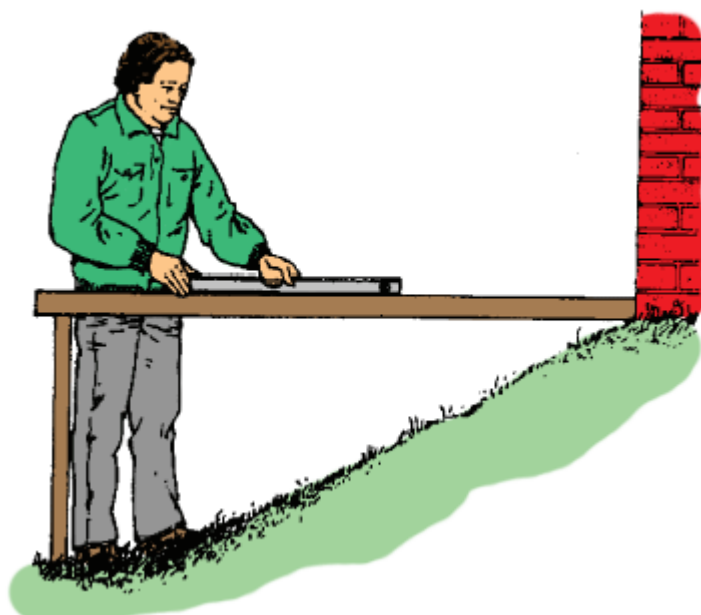


HOW TO MEASURE CHANGES IN LEVEL OR A SLOPE

Changes in level in a garden can be a designer’s windfall as it will allow you to develop a number of different features in your design. It is important that you plot these as it will affect just what goes where and your estimation of the materials that will be required.

To estimate a slope, stand in the lowest part of the garden and look straight ahead. If the highest point is lower than eye level simply estimate how high up your body this is and measure the height. If it is higher then look for a point at eye level and record this spot on your sketch. Then record the height of this point (the height of your eyes from ground level) and move to it to start the process again.

For a more accurate measurement you will need to use a pole and a straight edged plank and a spirit level.



Place one end of the plank on the ground at the top of the slope, position the pole vertically at the other end, then bring the plank to a level position by centering the bubble in the spirit level. Mark the level of the plank on the pole and record the measurement from the mark to the ground. Once this is complete remove the plank from its original position, place it in the position occupied by the pole and repeat the whole operation as many times as necessary to get down the slope.

Add all the vertical measurements together and you will have an accurate reading of the fall involved. If the garden slopes unevenly, you may need to repeat the process in different positions. Finally, plot the level lines on your survey as they will be invaluable when you come to prepare contour drawings.

PREPARING A SCALE DRAWING

Scale is defined as the ratio of the size of an object or the distance in a drawing to the actual size of the object or the actual distance. Ratio being a comparison of two numbers or quantities. For example:

3 to 5, or 3:5, or 3/5