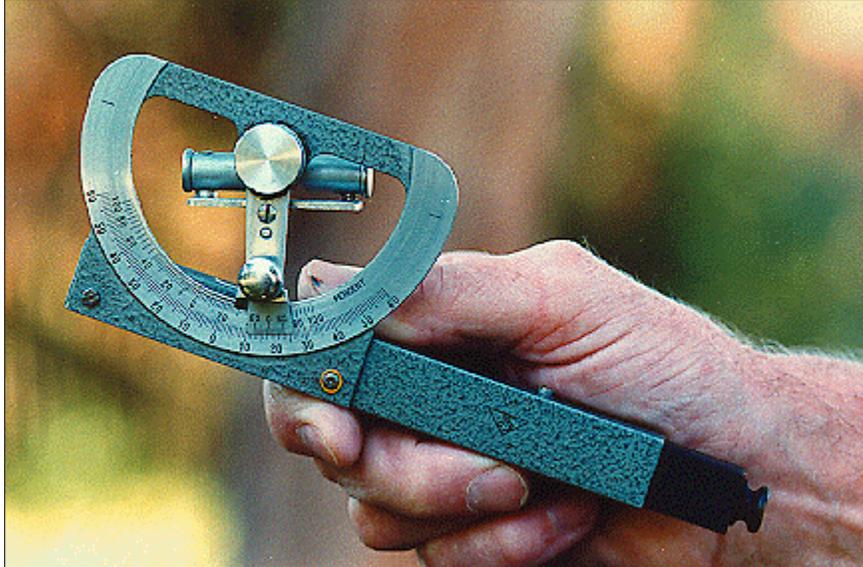


The Abney Level



The Abney Level is an engineering instrument which can be used to determine height. It is moderately expensive and of medium size and weight.

General Instructions

Using an Abney Level to determine tree height:

1. Measure the horizontal distance from the base of the tree (or position directly beneath the tree tip) to a location where the required point on the tree (e.g. tree tip) can be seen.
2. Sight at the required point and move the index arm over the scale until the bubble tube is level.
3. Read the percentage scale (or the degrees and minutes of the angle).
4. Calculate the height by multiplying the percentage read by the horizontal distance (or by multiplying the horizontal distance by Tan of the angle).
5. Site to the base of the tree and repeat steps 2 - 4.
6. Combine the heights from steps 4 and 5 to determine total tree height:
7. Add the 2 heights together if you looked up to the required point in step 2 and down to the base of the tree in step 5.
8. Subtract the height to the base of the tree from the height to the required point if you are on sloping ground and had to look up to both the required point and the base of the tree.
9. Check all readings and calculations.



The Abney Level

Forestry Suppliers Inc., <http://www.forestry-suppliers.com/index1.asp>

Sokkia™ Abney Level with 5x Magnification

Graduated 0 to $\pm 90^\circ$, 0 to $\pm 100\%$ on a stationary arc. Vernier reads to $10'$. Scale pointer has friction movement, locks with turn of thumbscrew. 5x Magnification. Eyepiece slides out to focus cross hairs, bubble. Objective lens slides out to focus target. Stadia ratio 1 to 100. 7-1/2"L. Flat base, brass tube with aluminum arc. Carrying case has belt loop, Velcro® closure.
\$240.00



PECO Topographic Abney Level with Internal Focusing

Graduated 0 to $\pm 100'$ (topo), 0 to $\pm 60^\circ$, 0 to $\pm 150\%$ on two interchangeable scale rings. No vernier. Scale pointer remains stationary while arc moves with turn of small thumbscrew. Arc locked by large thumbscrew. Internal focusing of bubble made by sliding knob on top of tube. 6-1/2"L. Flat base, brass tube with aluminum arc. Carrying case has belt loop, snap closure.
\$124.00

