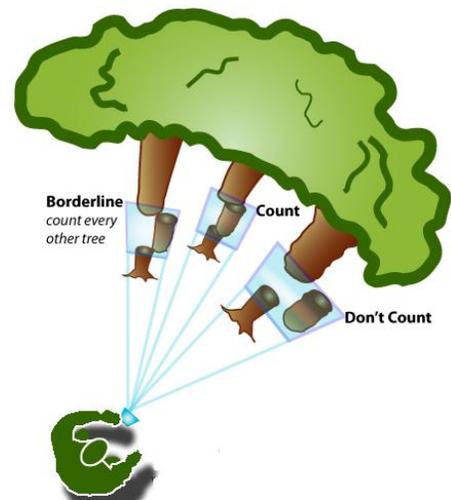


The Wedge Prism

The **wedge prism** is a prism with a shallow angle between its input and output surfaces. Refraction at the surfaces causes the prism to deflect light by a fixed angle. When viewing a scene through such a prism, objects will appear to be offset by an amount that varies with their distance from the prism.

In forestry, the wedge prism is used to record and calculate basal area of a stand otherwise known as tree inventory. Because the wedge prism refracts light to offset the object of interest (ex. A tree), it can be used to determine whether or not the tree is inside the plot radius based on the diameter at breast height of the tree and its distance from the plot center.

- If the tree is inside the plot radius, then the offset section of the tree will overlap the original bole making it an "IN" tree;
- if the tree is on the border of your plot radius the offset section of the trunk will be aligned with the original bole which is referred to as a borderline tree;
- if the tree is outside your plot radius then the offset section of the tree will not overlap the original bole which is referred to as an "OUT" tree.



Make sure that as you work your way around the plot, you keep the prism fixed over plot center while you move around it. You will see as you move around the plot that the further from plot center a tree is, the larger it must be to be considered in.

Operating a wedge prism is one technique used in forestry today because, the wedge prism is simple, relatively inexpensive, portable, and as accurate as other angle gauges when properly calibrated and used properly. One simply holds the prism directly over the plot center, and by focusing on a tree, the refracted light will offset the trunk of the tree.

