



A tree scale stick has three different purposes.

1. Estimating tree diameter

Diameter is measured with the Biltmore Scale. To do this the stick is held at breast height (4.5 feet up from the ground) and 25 inches from the eye. The left end of the stick is lined up with the left side of the tree. The number on the right side of the stick that lines up with the right side of the tree is the diameter of the tree. Your head should be held stationary, with only your eyes moving to the right and left for readings.



2. Estimating logs in a tree

A "log" is a standard unit of measure for lumber. It is equal to a 16 foot length of tree that is at least 8 inches in diameter. A half log is an 8 foot length of tree that is at least 8 inches in diameter. Determining the the number of logs in a tree is done with



the Merritt Hypsometer. The tree scale stick is held vertically with the narrow edge facing you. Standing 66 feet from the tree, the bottom of the stick is aligned with the bottom of the tree. A reading is taken at the top of the tree at the point where the diameter is no longer at least 8 inches.



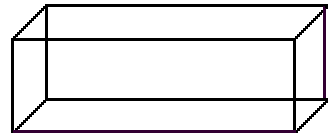
3. Estimating board feet*

Once the diameter and number of logs in a tree are determined you can estimate the number of board feet in the tree. To do this the table on the tree scale stick is used. Diameter is read down and height is measured across. The box where the two numbers meet is the number of board feet in the tree.

The tree scale stick is used in the forest inventory investigation.

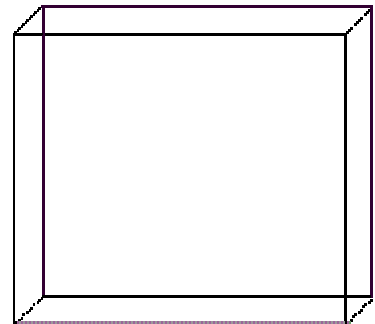
*What is a board foot?

Lumber is measured in an increment called a board foot. A board foot is a unit of volume equal to 144 cubic inches. A piece of wood one foot by one foot by one inch is equal to 144 cubic inches. There are a variety of measurements that can equal 144 cubic inches.



A board 3 in. X 4 in. X 12 in. equals 144 cubic inches.

So does a board 12 in. X 12 in. X 1 in.





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