



Champion Trees Project

Tree measuring guides

To nominate a champion tree, you will need to measure tree circumference (inches), height (feet), and average crown diameter (feet).

Calculate the tree score using the following formula:

$$\text{Circumference} + \text{Height} + 1/4 \text{ Diameter} = \text{Score}$$

You will need:

1. Flexible measuring tape
2. Pair of stakes
3. Notebook
4. Pencil
5. A partner

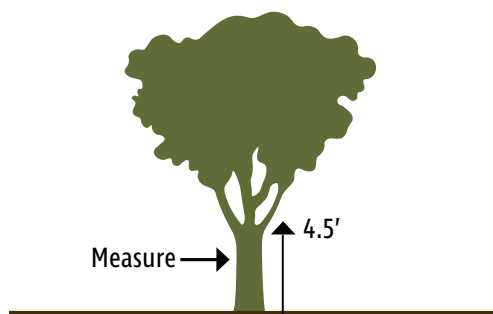
How to measure tree circumference

Step 1: Place one end of your measuring tape at the base of the tree and measure up the trunk until you reach a height of 4.5 feet. You will use the 4.5 ft mark to measure the trunk's circumference.

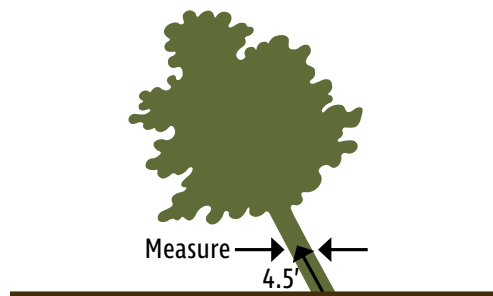
Step 2: Wrap the measuring tape around the trunk at the above-mentioned height of 4.5 feet above the ground. Write down the measurement value that lines up with the "0" (in inches).

What to do...

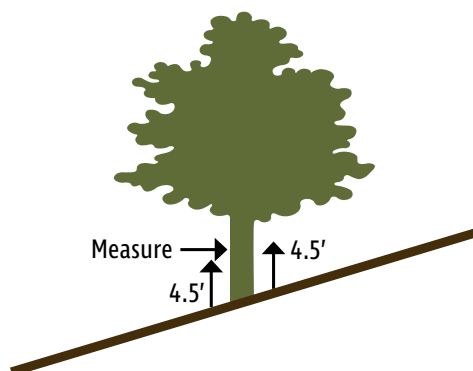
If the tree divides at or below the 4.5 feet mark, measure the trunk's circumference just below the division.



If the tree is leaning, follow the inclination of the trunk to measure 4.5 feet from the base of the tree.



If the tree is on a slope, measure 4.5 feet up from the base at the lowest and highest side of the tree. Identify the midway point between the two measurements and measure the circumference from the midway point.



How to measure tree height

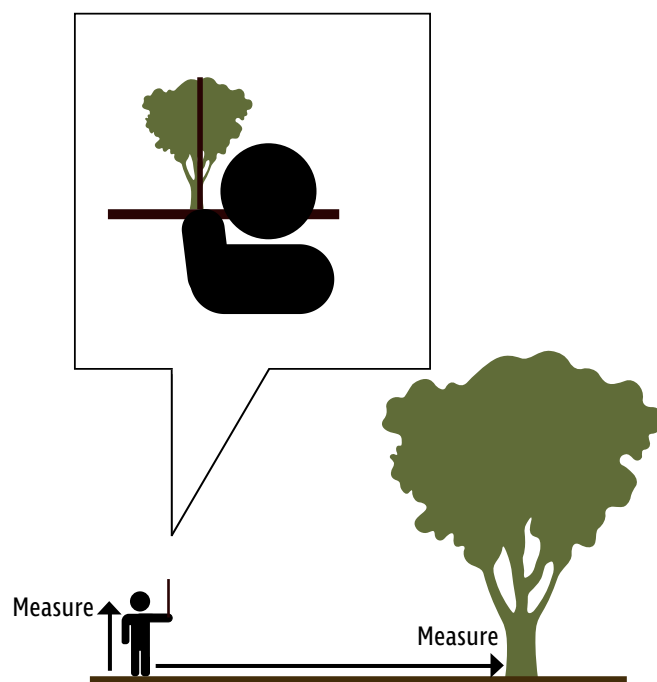
Step 1: Find a straight stick the size of your arm (hand to shoulder). Facing the tree, hold stick up vertically with your arm fully extended to make a 90-degree angle. Keep your arm parallel to the ground.

Step 2: Walk back, away from the tree, until the top and bottom ends of the stick align with the top and base of the tree.

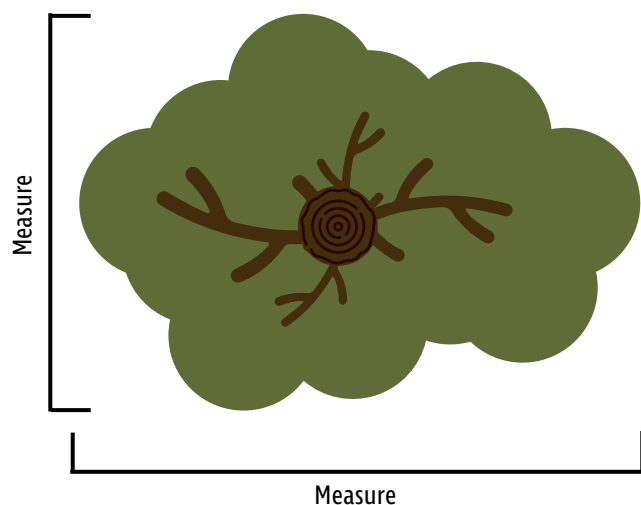
Step 3: Measure the distance between the floor and your eyes (in feet).

Step 4: Measure the distance between you and the tree (in feet).

Step 5: Add both measurements to get the tree's height.



How to measure crown diameter



Step 1: Identify the widest part of the crown, where the branches extend the furthest. Using stakes, mark the ground below the points where the branches end.

Step 2: Measure the distance, in feet, between the stakes.

Step 3: Identify the narrowest part of the crown and use the stakes to mark the points.

Step 4: Measure the distance, in feet, between the stakes.

Step 5: Add both measurements. Then, divide the result by two (2).

Learn more about the Champion Tree Project at <https://research.fs.usda.gov/iitf/about/sptf/ctp>

