

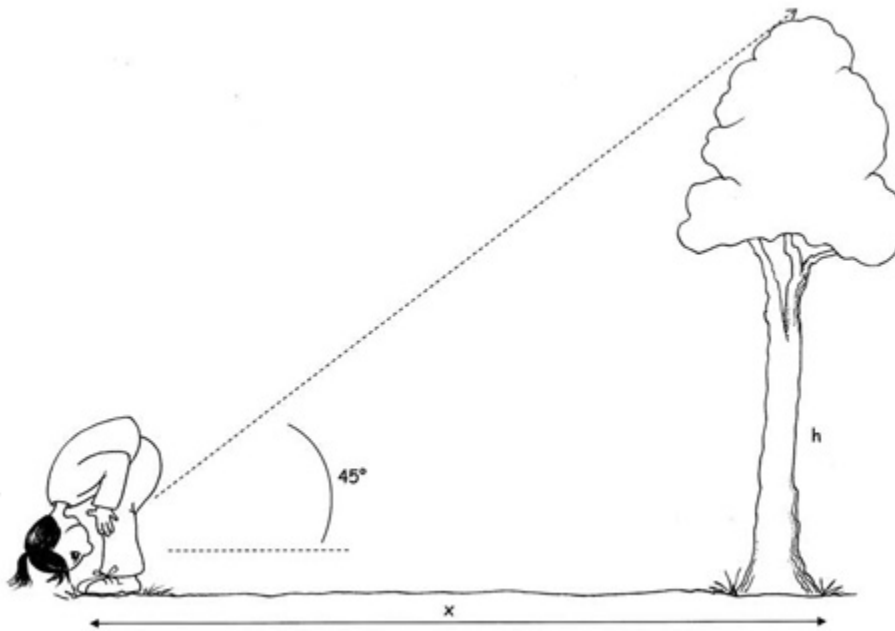
Forest Mathematics

Apply new math skills by having students measure/calculate the diameter, circumference, height, area and volume of trees near your school.

You can easily find the circumference with a measuring tape. The best place to take this measurement is about three feet off the ground (shoulder height for many sixth graders).

Here is a fun way to find the height of a tree and discuss basic trigonometric concepts:

Have students look between their legs until they can just see the top of the tree they want to measure. The average person looks through their legs at roughly a 45 degree angle. This means that the student's distance from the tree will be roughly the height of the tree (see diagram below).



Another way to calculate height is to have a student with a known height (e.g., 5 feet) stand next to a tree trunk. Back away until your thumb looks to be the same height as the student. Then, measure how many “thumbs” high the tree appears to be, multiply by 5 feet and, voila, you have an estimate!

Standards: *Grade 6 Mathematics Measurement and Geometry 1.1, 1.2, 1.3, 2.2*