

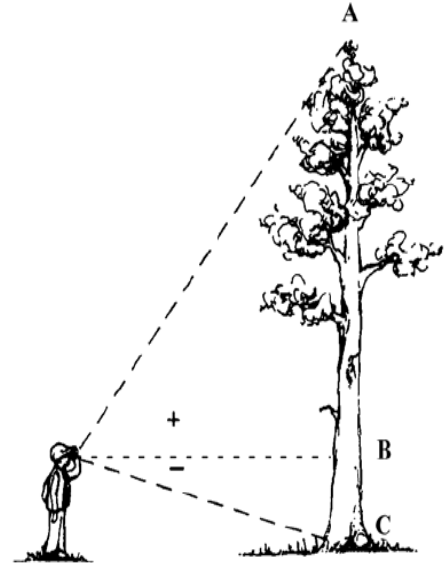
FOR 274 Assignment 6: Calculating Tree Heights

This assignment should be completed and handed in at the start of the next lab.

Credit: This Assignment is worth 20 points

Task 1: Use what you have learned in class and from mathematics to answer the following questions: Refer to the figure on the right and calculate the total height to the nearest foot from each of the following trees:

- i. You are standing at a horizontal distance of 100 feet. Your percentage scale reads 50 to A and -20 to C.
- ii. You are standing at a horizontal distance of 50 feet. Your percentage scale reads 40 to A and -10 to C.
- iii. You are standing at a horizontal distance of 66 feet. Your $1/66$ scale to A reads + 50 and to C reads -10.



More questions on next page:

Refer to the figure on the right and calculate the total height to the nearest foot from each of the following trees:

iv. AB is measured as 140 feet and BC as 35 feet.

v. AB is measured as 170 feet and BC is 85 feet.



Use basic trigonometry to calculate the total height to the nearest foot from each of the following trees:

vi. You are standing at a horizontal distance of 100 feet. Your sighting to base = -5° .
Your sighting to top = $+45^\circ$

vii. You are standing at a horizontal distance of 66 feet. Your sighting to base = $+10^\circ$.
Your sighting to top = $+60^\circ$.

viii. You are standing at a horizontal distance of 30m. Your sighting to base = -3° . Your
sighting to top = $+58^\circ$.