

FRST 211 – Forest Measures III
Lab 1 – Log Scaling Net Measures

When requested, provide proper species code and net measures (end measures to nearest rad, length to nearest 0.1 m and volume to nearest 0.001 m³). Show all calculations, including units, in a neat and orderly fashion.

GROSS MEASURES (provide measures for ends, length and gross volume)

- 1) Top: 23 and 24 rads, butt: 26 and 28 rads, length: 9.04 m. Determine:
 - a. the proper measures for ends and length
 - b. volume using the scale stick (in both dm³ and m³)
 - c. volume using Smalian's formula

- 2) Top: 24 and 25 rads, butt: 26 and 29 rads, length: 7.45 m. Determine:
 - a. the proper measures for ends and length
 - b. volume using the scale stick (in both dm³ and m³)
 - c. volume using Smalian's formula

NET MEASURES (provide net measures for ends and length)

T = top end measure (rads) of log, R_T = top end measure (rads) of rot
B = butt end measure (rads) of log, R_B = butt end measure (rads) of rot
C = core of solid wood (rads)
D & E = length & width of "rot rectangle" in rads
L_(A, B, C) = Length (m) of log

- 3) Log A: Douglas-fir, T = 25, R_T = 13, B = 31, R_B = 16, L = 11.0
 - a. Use length deduction method
 - b. Use end deduction method

- 4) Log B: western hemlock, T = 42, B = 50, R_B = 43, L = 9.2
 - a. Use length deduction method

- 5) Log C: grand fir, T = 17, B = 24, L_A = 4.8, L_B = 5.0
 - a. Use length deduction method

- 6) Log D: western red cedar, T = 46, B = 52, R_B = 40, C = 32, L = 12.0
 - a. Use length deduction method
 - b. Use end deduction method

- 7) Log E: Sitka spruce, T = 27, B = 33, R_B = 22, L_A = 5.0, L_B = 1.0, L_C = 5.0
 - a. Use length deduction method

- 8) Log F: Yellow cedar, T = 23, B = 28, D = 11, E = 4, L = 14.0
 - a. Use length deduction method
 - b. Use end deduction method