

How big is my tree?

Adapted from Project Learning Tree
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Materials: 2 people, 12 inch ruler, paper, pencil, height of the person standing by the tree in inches.

1. Have one person stand at the base of the tree. They should stand up straight.
2. The other person will hold the ruler up to eye level. They will keep moving backwards until the tree appears to be 12 inches tall.
3. Record how tall the person appears to be on the ruler. -----

4. Estimating the height of the tree.

a)
$$\frac{12}{\text{height of the person on the ruler}} = \text{scale factor}$$

b) Measure the height of the person (in inches) of the person who stood at the base of the tree

c) Multiply the height of the person by the scaling factor

$$\text{height of person} \times \text{scaling factor} = \text{approximate height of tree in inches}$$

d) Divide the answer in (4c) by 12 to get the approximate height of the tree in feet.

$$\frac{\text{answer in 4c}}{12} = \text{approximate height of the tree in feet}$$

5. Why did we divide by 12 in step 4?

