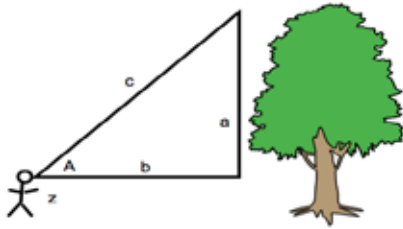## What is the Value of this Tree?

1. Determine the height of your tree.

Find a place to stand where you can see the top of your tree. Measure the distance from the base of the tree to where you stand with the meter tape.

 (b): _____ m

Find the angle on clinometer from your eye to the top of your tree

 (A):_____ degrees

Measure the distance from ground to observer's eyes

 (z):_____ m

Height of tree = H = $(\tan(A)) * b + z$

 H = _____ m

2. Measure the circumference of the tree at chest height.
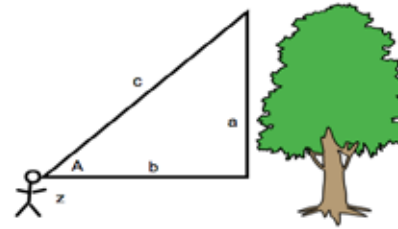
 Circumference of tree: _____ m

 (1 inch = 0.0254m)

3. Determine the amount of Carbon in the tree (C)

 Use the "How Much Carbon Is in a Tree" chart with the height and circumference of your tree.

 Total carbon in your tree (C) :_____ kg

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4. Determine the amount of Carbon Dioxide Sequestered by your tree

Using "total C in your tree" from <u>question 3</u> and knowing that:

500 kg of C is equal to 1,833 kg of sequestered CO_2, then

(C* 1833)/500 = _____ kg of Sequestered CO_2 in your tree

5. Only 23% of the top of the tree will be used for biofuel

Using "total C in your tree" from <u>question 3</u>

C* .23 = _____ kg of potential biofuel

6. Determine the amount of jet fuel (in miles travelled) (M) based on the tree
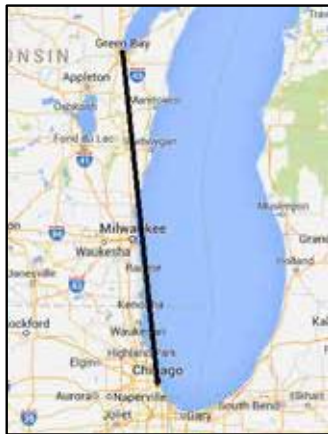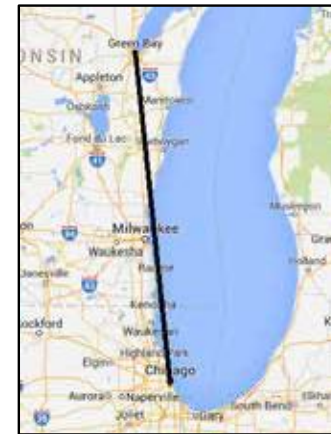
Using kg of potential biofuel from <u>question 5</u>

And knowing that 500 kg of C can fuel a jet to fly 11 miles, then

(C* 11)/500 = (M) _____ miles your tree can fuel

7. How many identical trees are needed for the 175 mile flight between Lambeau Field and Soldier Field?

175/M (<u>from question 6</u>) = _____ trees

Lambeau Field
to Soldier Field
=175 miles