Learner 1: PC 1.1 and 1.2

Learner 1: Meets Requirements

Intended for teacher use only

Cutting down a tree

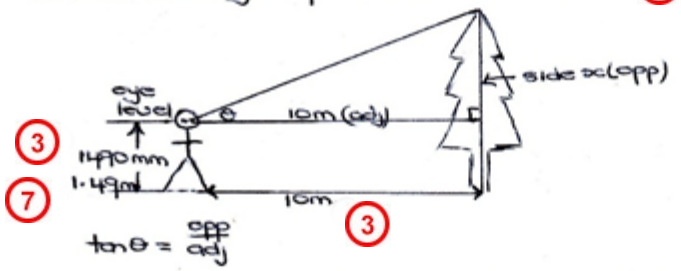
Sarah wants to cut down a tree in her back paddock, but needs to know how tall it is so she can fell it without hitting anything on the ground. Your tutor/teacher will show you a tree outside that is the same height as Sarah's tree. (1)

Estimate the height of the tree and then take appropriate measurements and make calculations to work out how tall the tree is for Sarah.

It may help to draw a diagram.

Useful formula: tan x = Opp/Adj sin x = Opp/Hyp cos x = Adj/Hyp

I think the height of the tree is about 12m (2)



measured θ with the clinometer on my iphone

θ = 45° (4) tan 45° = 1

$\tan 45° = \frac{x}{10m}$

10m x 1 = 10m

x = 10m

Total height of tree is

10m + 1.49m = 11.49m

(5)

Teacher/tutor attestation (6)

The estimation was made before any measurements were taken

I observed Learner 1 take these measurements without assistance, using clinometer app on iphone and measuring tape

The measurements taken were accurate (within an acceptable tolerance range.

Signed: AZ3 (tutor/teacher Date: 10/6/14