

Name:

Section 6.1d – Applications of Trigonometry

Solve for the required information.

An observer looks up to the top of a tree. The angle of inclination measured from their feet to the top of the tree is 53° . If the tree is 34m height, how far away from the tree is the person standing? Draw a picture and round answers to the nearest meter.

Up in my hot air balloon I spot two small ponds to the East and West of my position. To the East, the angle of depression is 48° and to the West, the angle of depression is 32° . If my balloon is 250m above the ground, how far apart are the two ponds? Round to the nearest meter.

A surveyor mapping a road Due East at point A look ahead and notice a lake at point B , they immediately turn $N26^\circ E$ and travel for 35km to point C . They then turn $S53^\circ E$, how far do they have to travel before they meet their original Due East line $A - D$ at point D ? (Pictures will really help).