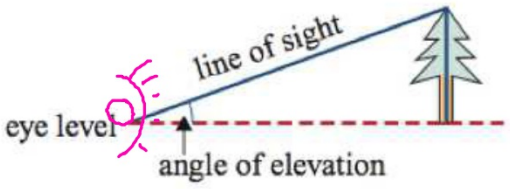
# Geometry Right Δ Trig

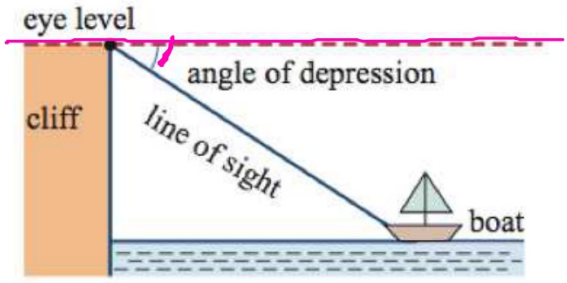
Homework:
Page 116-3L: all
Page 118-3M: all

# Typical application of SOHCAHTOA

## Angle of Elevation

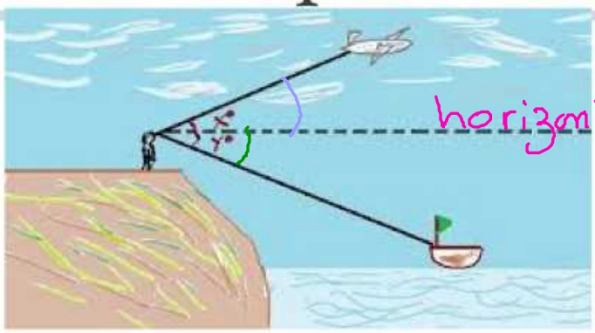


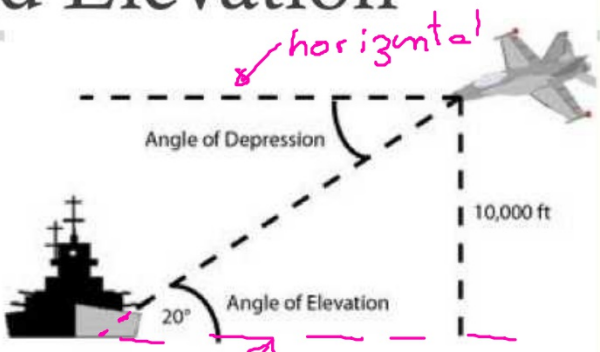

## Angle of Depression




Both angle of depression and elevation are measure from the HORIZONTAL and the line of sight.

# More examples of angles of Depression and Elevation



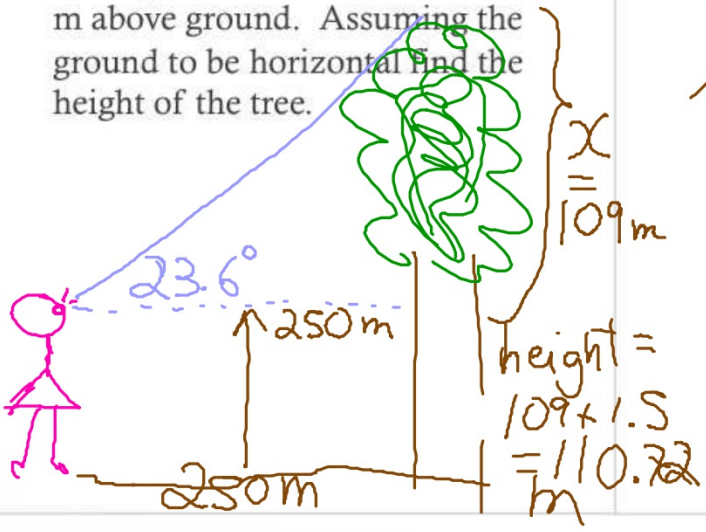

$x°$ = angle of elevation

$y°$ = angle of depression

## Word examples → draw the diagram

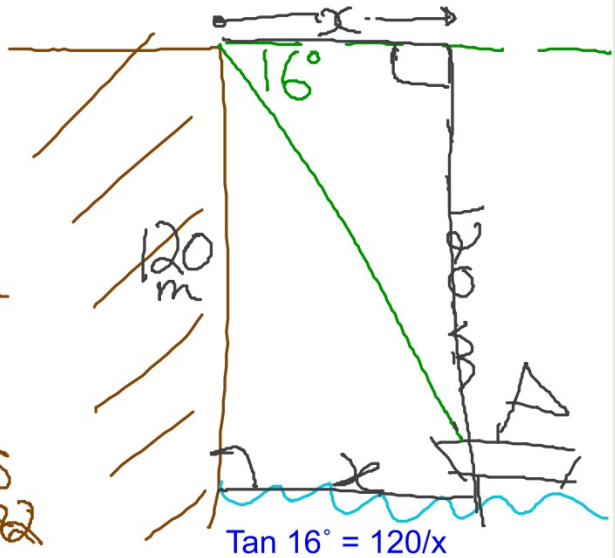
### Angle of Elevation

- Sarah measures the angle of elevation to the top of a redwood in the Montgomery State Reserve as 23.6° from a point which is 250 m from its base. Her eye level, where the angle measure was taken, is 1.5 m above ground. Assuming the ground to be horizontal find the height of the tree.




### Angle of Depression

- The angle of depression from the top of a 120 m high vertical cliff to a boat is 16°. Find how far the boat is from the base of the cliff.

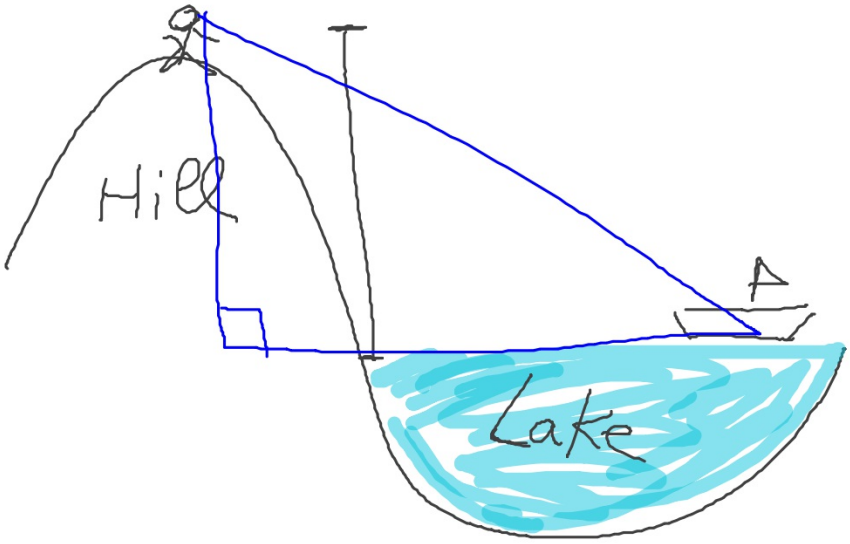



Tan 16° = 120/x

x = 120/tan 16°

x= 418.4897333=418 metres

Example from textbook. A hill and a lake.




Can you see where the right $\Delta$ will be?

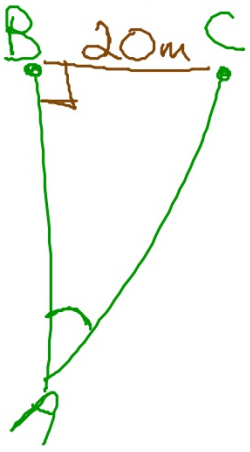
From worksheet given in class:

exercise 10C

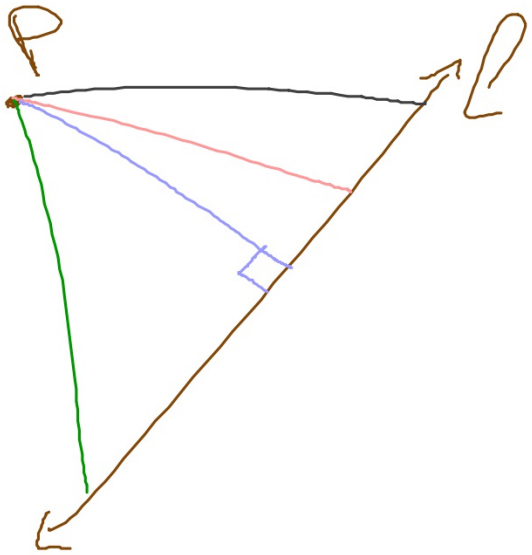
#1, 3, 4, 5, 6, 8, 9

13, 14

Extension work = 10, 16, 17

Remember that when they ask you for the distance of a point (P) to a line ($l$), it is always asking you for the "shortest" distance which is the length fo the perpendicular segment.




Same applies when they ask you the distance between two lines, line $l$ and line $m$.
*It has to be a perpendicular segment.*