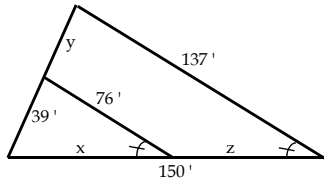Perform your work **on separate paper** as necessary **and attach it**. Write your answers on <u>this page</u>. Answers must be **boxed or circled** and clearly **legible**. Where possible write answers as an **exact** integer or fraction otherwise use **two** decimal accuracy. Leave π in answers where applicable. **Units** required.
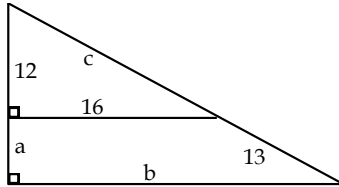
1)   Find the angle y = 2x/3 + 7 makes with the y-axis.

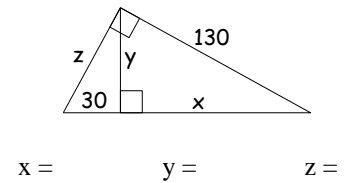2)   Find: x =   y =

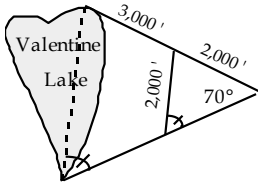These are not right triangles!
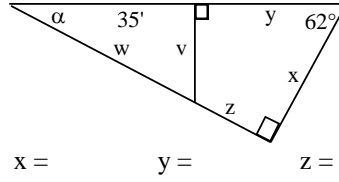
3)   Find: a =   b =

4)   Find x, y, z

X =   y =   z =

5)   Find the length of the lake.
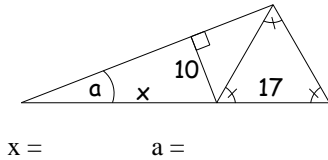

L =

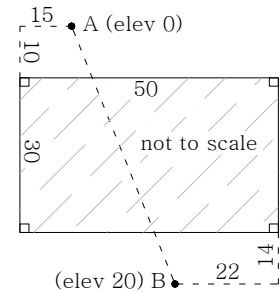6)   Total area is 900. Find: x, y, z

x =   y =   z =

7)   Find x and a.

X =   a =

8)   Galen must measure the distance from one side of a building to the other. Find the distance from A to B using the measurements given. Be sure to account for the difference in elevation.
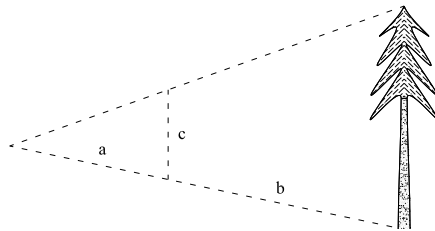

9) Find H

a = 16' 8"

b = 23' 7"

c = 2'

H =

10) Find D
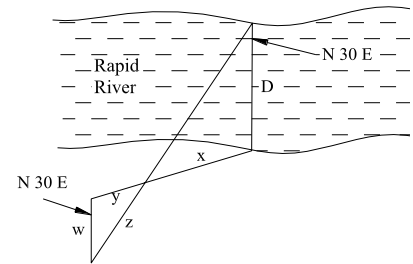
w = 4.8 m

x = 12.0 m

y = 5.0 m

z = 6.2 m

D =

BONUS

A Ship has a lookout in the crows nest 10 m above the water looking for a lighthouse that is situated on a rock outcropping. The light of the lighthouse is 40 m above the water. At what distance will the lookout see the light directly? R$_E$ ≈ 6,370 km

(a) As a straight line distance

(b) As a distance along the curve of the Earth