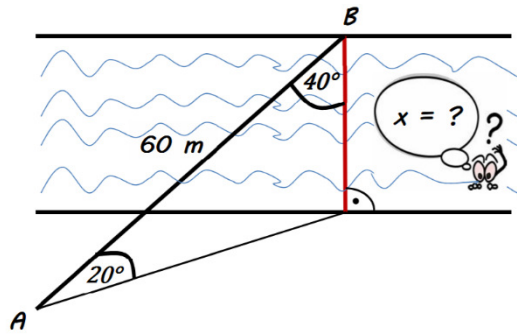


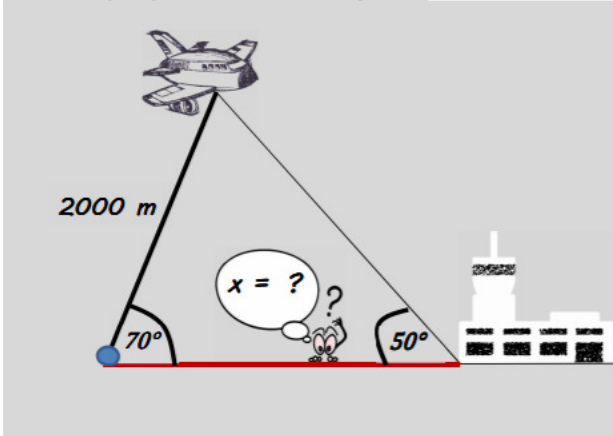
Sine Law – Determining the length of a missing side

- 1.) How wide is the river in the picture if the length of line AB is 60 m , and the angles formed by it are 40° and 20° , as indicated in the picture?

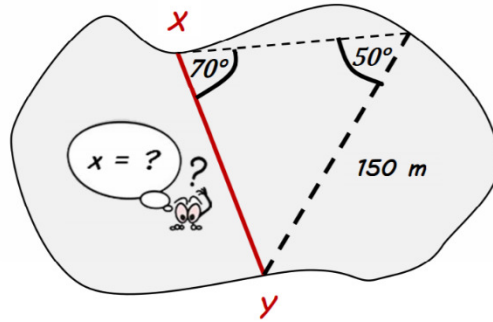


2.)

A viewer is looking up at a 70° angle to watch a plane fly towards an airport terminal, and his distance from the plane is 2000m. How far is the viewer from the terminal if you know that someone standing at the terminal could watch the plane by looking up at a 50° angle?



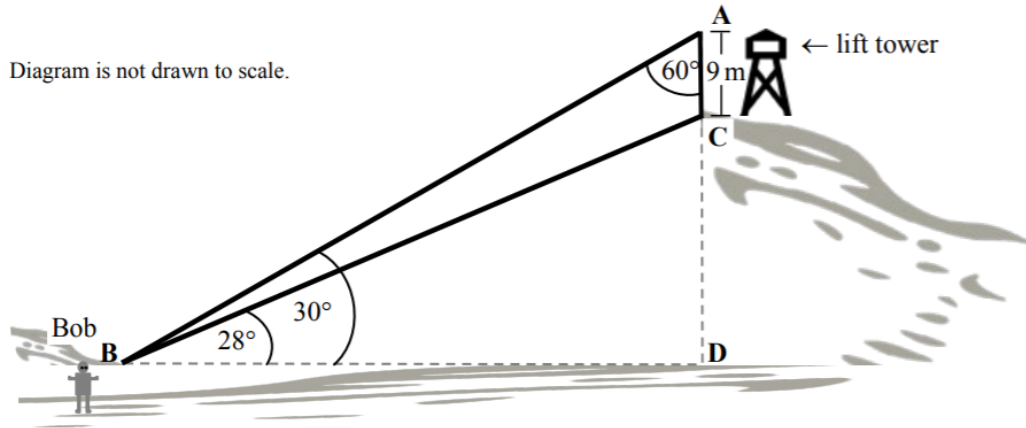
- 3.) The land in the picture is supposed to be divided into two parts by the boundary line XY . How long is line XY if the angles and the measurement indicated in the picture are all accurate?



4.)

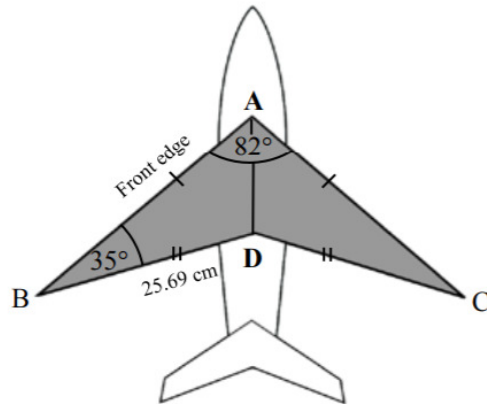
Bob is standing at the base of a mountain. The angle of elevation to the bottom of the lift tower is 28° . The angle of elevation to the top of the lift tower is 30° . The lift tower is 9 m tall.

Diagram is not drawn to scale.



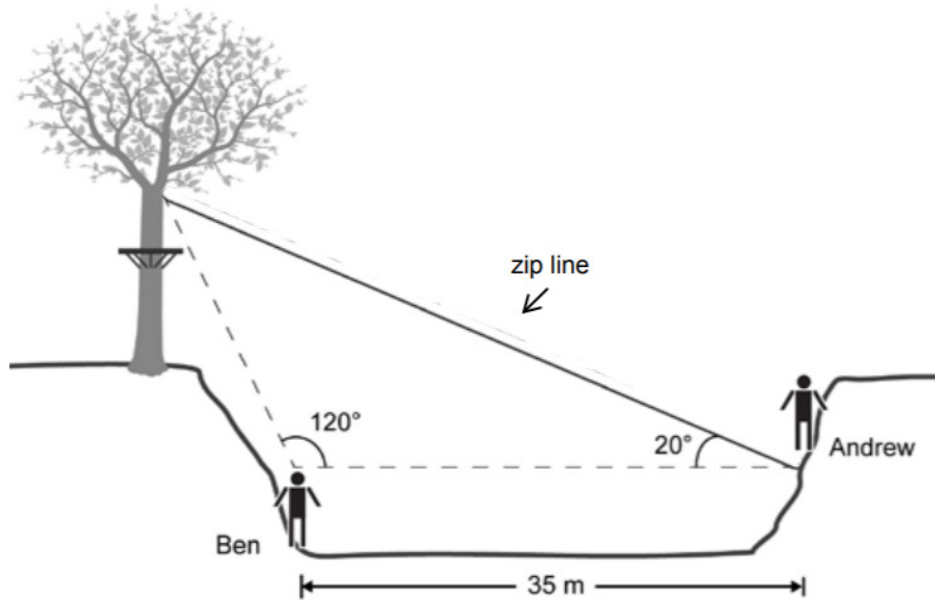
Calculate the distance from Bob to the bottom of the lift tower (\overline{BC}).

- 5.) Margo is building a model airplane. The measure of $\angle BAC$ is 82° , \overline{BD} is 25.69 cm and $\angle ABD$ is 35° .



Calculate the length of the front edge of the wing \overline{AB} .

- 6.) Andrew and Ben are building a zip line across a ravine.



Calculate the length of the zip line.