

Chapter 4 Lt 4 Day 4

I can solve for missing parts of an **oblique** triangle given an application problem.

Law of Sines

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

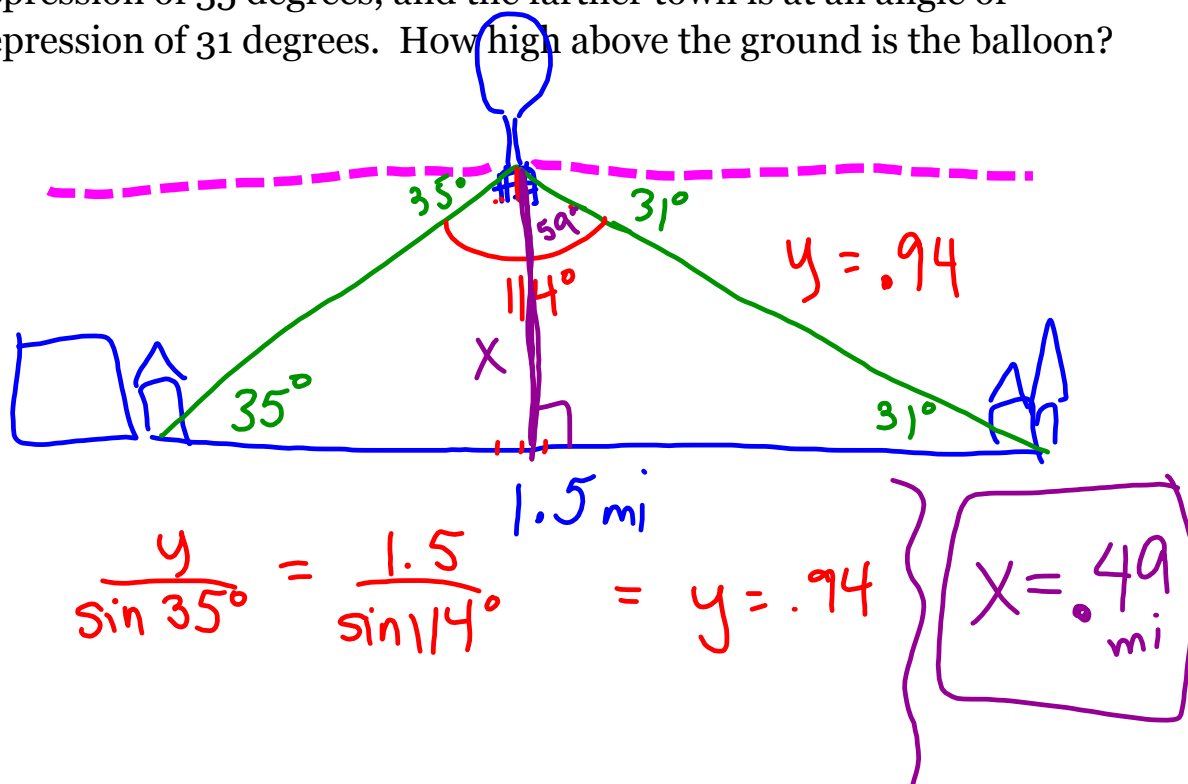
Law of Cosines

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$b^2 = a^2 + c^2 - 2ac \cos B$$

$$c^2 = a^2 + b^2 - 2ab \cos C$$

1.) A balloonist is directly above a straight road 1.5 miles long that joins two villages. She finds that the town closer to her is at an angle of depression of 35 degrees, and the farther town is at an angle of depression of 31 degrees. How high above the ground is the balloon?



2.) A surveyor wishes to find the distance between two points A and B on opposite sides of a lake. While standing at point C, she finds that $AC=259$ m, $BC=423$ m, and angle ACB measures 132.75° . Find the distance of AB.

