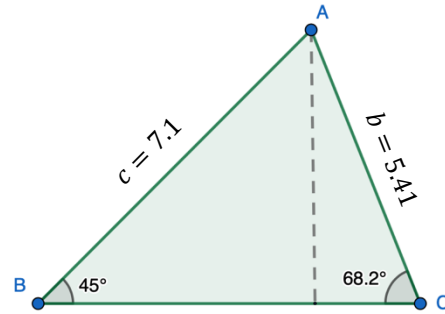




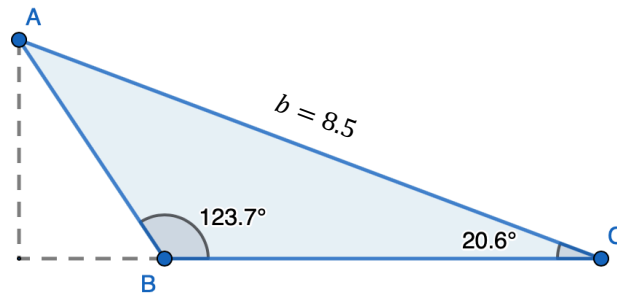
We have learned about how the sine, cosine, and tangent values give ratios of sides in a right triangle. But what if we don't have a right triangle? Can we still figure out missing sides and angles?

- Triangle ABC is shown to the right. Show how you can find the height of the triangle in two different ways.



- Write an equation that relates sides b and c with $\sin B$ and $\sin C$.

- Sometimes the height of the triangle is outside the triangle, like in $\triangle ABC$ shown below.



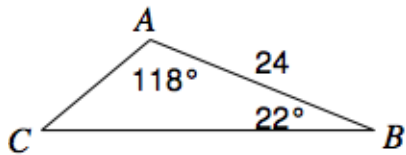
- Find the height of $\triangle ABC$.
 - Find the length of \overline{AB} .
- Does your equation from question 2 still work? Explain.

Section 5.1 Day 1—Law of Sines

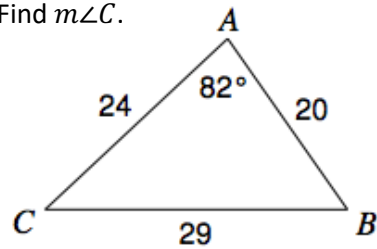
Important Ideas:

Check Your Understanding!

1. Find AC .

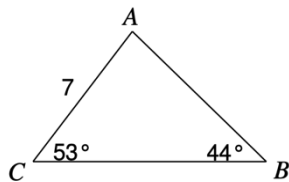


2. Find $m\angle C$.

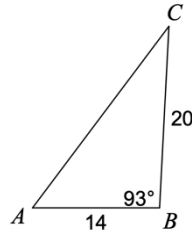


3. Determine whether each triangle can be solved with the Law of Sines. Explain your reasoning.

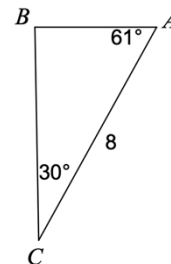
a)



b)



c)



4. Solve the triangle. You must sketch a picture of the triangle.

$$m\angle C = 13^\circ, m\angle A = 22^\circ, c = 9$$