Section 8.2: Law of Cosines

Wednesday, March 02, 2016
11:10 AM

if I asked you to solve the following triangle

$$a = 3.0,\quad b = 4.0,\quad c = 6.0,$$

could you use the law of sines?

not easily, because you don't have a matching pair of angle & opposite side (both A & a, etc)

in this situation, use the law of cosines instead

law of cosines:

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

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

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