

## Re: complex numbers and the law of cosine–

---

*Source:* <http://sci.tech-archive.net/Archive/sci.math/2008-10/msg01631.html>

---

- *From:* JEMebius <jemebius@xxxxxxxxxx>
  - *Date:* Mon, 13 Oct 2008 01:44:09 +0100
- 

deadpickle wrote:

I am trying to find an angle in an obtuse triangle. The only way I can figure to do this is to use the law of cosine. Here's the problem:

$$c^2 = a^2 + b^2 - 2ab \cos C$$
$$B = \arccos((c^2 - a^2 - b^2) / (-2ab))$$

were:

$$a = 3.105$$

$$b = 3.803$$

$$c = 6.944$$

When I solve for the angle B I get a complex number (), why?  
Visualizing the problem show that the angle should be solvable. Is there a way to get a real number for this?

I am curious about the provenance of these figures.

Are they the sides of a very flat-shaped obtuse triangle as measured rather sloppily in the wee small hours under bad lighting?

Or did your a, b and c come from a bad homework problem?

Johan E. Mebius

.