

The Law of Cosines

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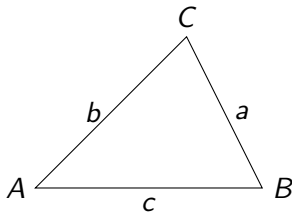
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Announcements

- ① Homework in M.O.M.
- ② Project in M.O.M.
- ③ Office hours 10am - 11am

The Law of Cosines

Now, let's develop another very special law, the Law of Cosines.



The Law of Cosines

The Law of Cosines

We've just developed the Law of Cosines!

The Law of Cosines

For any triangle with angles A , B and C and corresponding side lengths a , b and c , we have

$$a^2 =$$

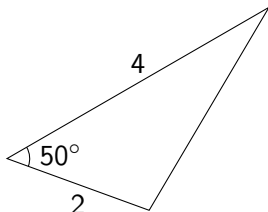
$$b^2 =$$

$$c^2 =$$

Using the Law of Cosines

In practice, we need to use the Law of Cosines to solve an oblique triangle in which we know two side lengths and the angle included between those sides: _____.

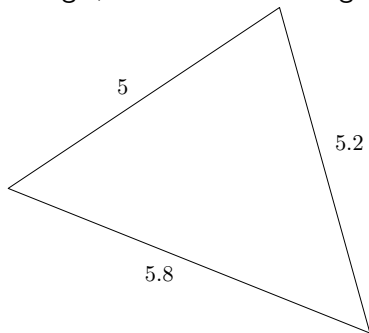
Here's an example:



Example

Example

We can also use the law of Cosines if we know all of the sides of an oblique triangle, but none of the angles:



Applied Example

Let's finish up that last example:

