

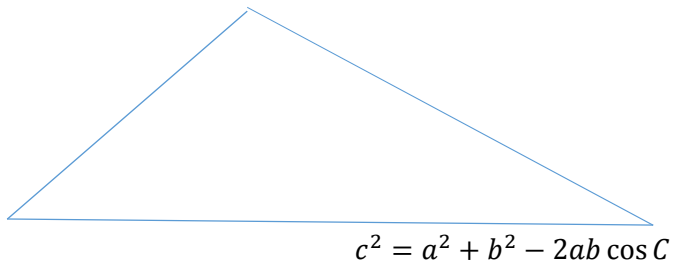
2.4 The Cosine Law

The Cosine Law is used mainly when we cannot use the sine law:

-specifically when we have SAS or SSS we can use Cosine Law

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The Cosine Law:



Example 1: Finding a side

a.) In $\triangle ABC$, $\angle A = 64^\circ$, $b = 232$ cm and $c = 165$ cm. Determine the length of a to the nearest cm.

b.) In $\triangle LMN$, $\angle L = 110^\circ$, $m = 25$ m and $n = 13$ m. Determine the length of l to the nearest tenth of a meter.

Example 2: Finding an angle

a.) In $\triangle ABC$, $a = 32$ cm, $b = 23$ cm and $c = 28$ cm. Determine the measure of $\angle A$ to the nearest degree.

b.) In $\triangle ABC$, $a = 15$ cm, $b = 21$ cm and $c = 10$ cm. Determine the measure of $\angle B$ to the nearest degree.

Solving a triangle:

-find all angles and sides

-use a combination of sine law, cosine law and the sum of the interior angles = 180° to find all missing measures and sides

Example 3: Solve the triangle

In $\triangle ABC$, $a = 11$ cm, $b = 5$ cm and $\angle C = 20^\circ$. Find all missing sides (nearest tenth) and angles (nearest degree)