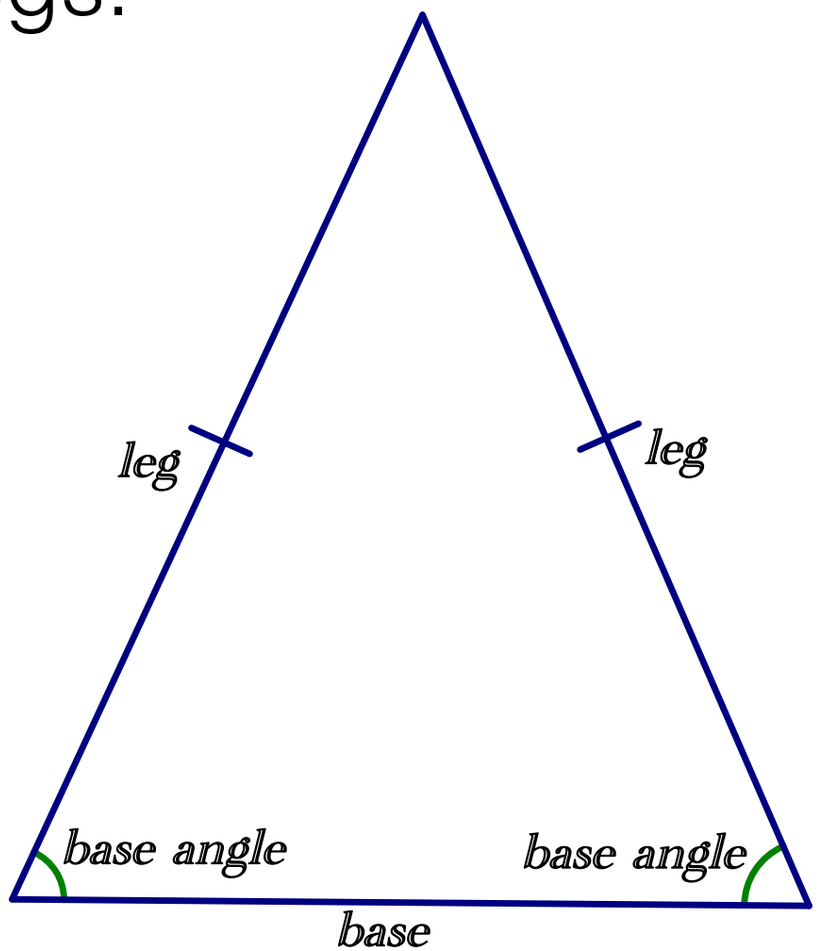
Proving Theorems about Isosceles Triangles (5.6.2)

May 2nd, 2018

Isosceles Triangles

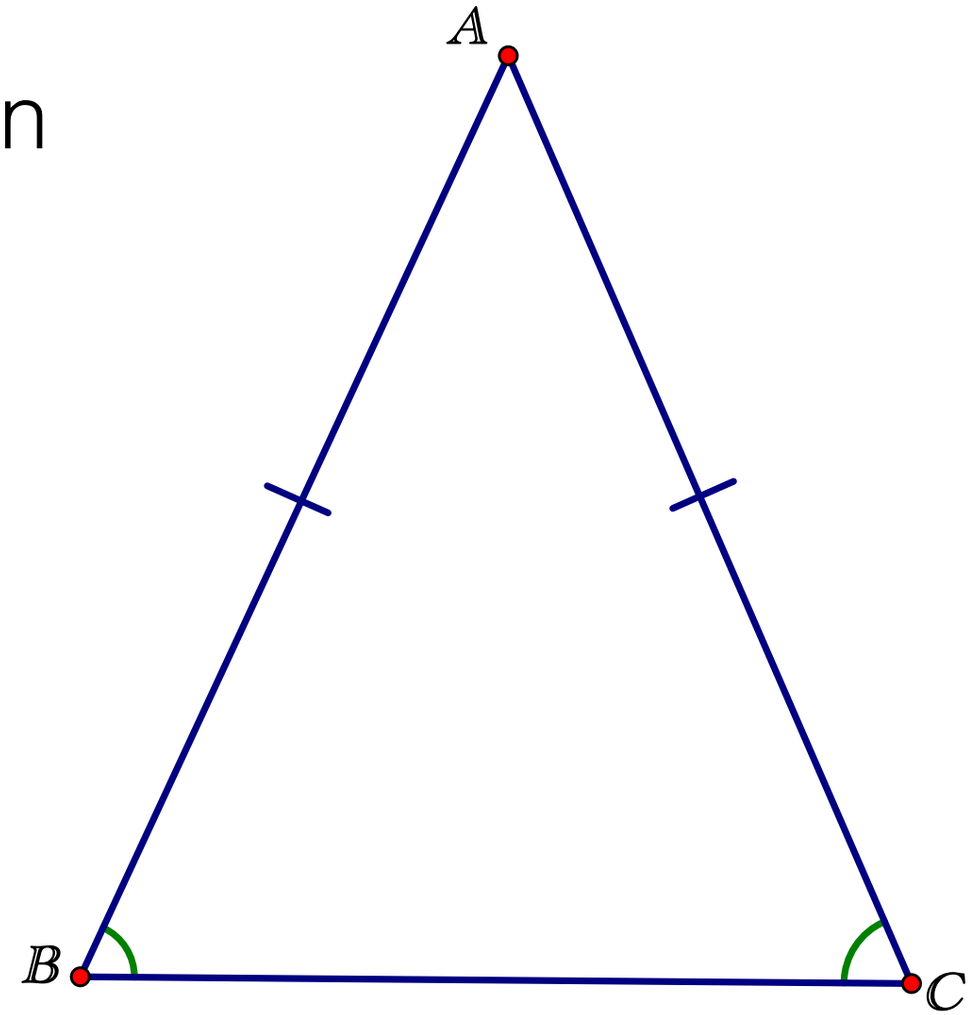
Definition: An isosceles triangle has two congruent sides, called legs.



Isosceles Triangle Theorem

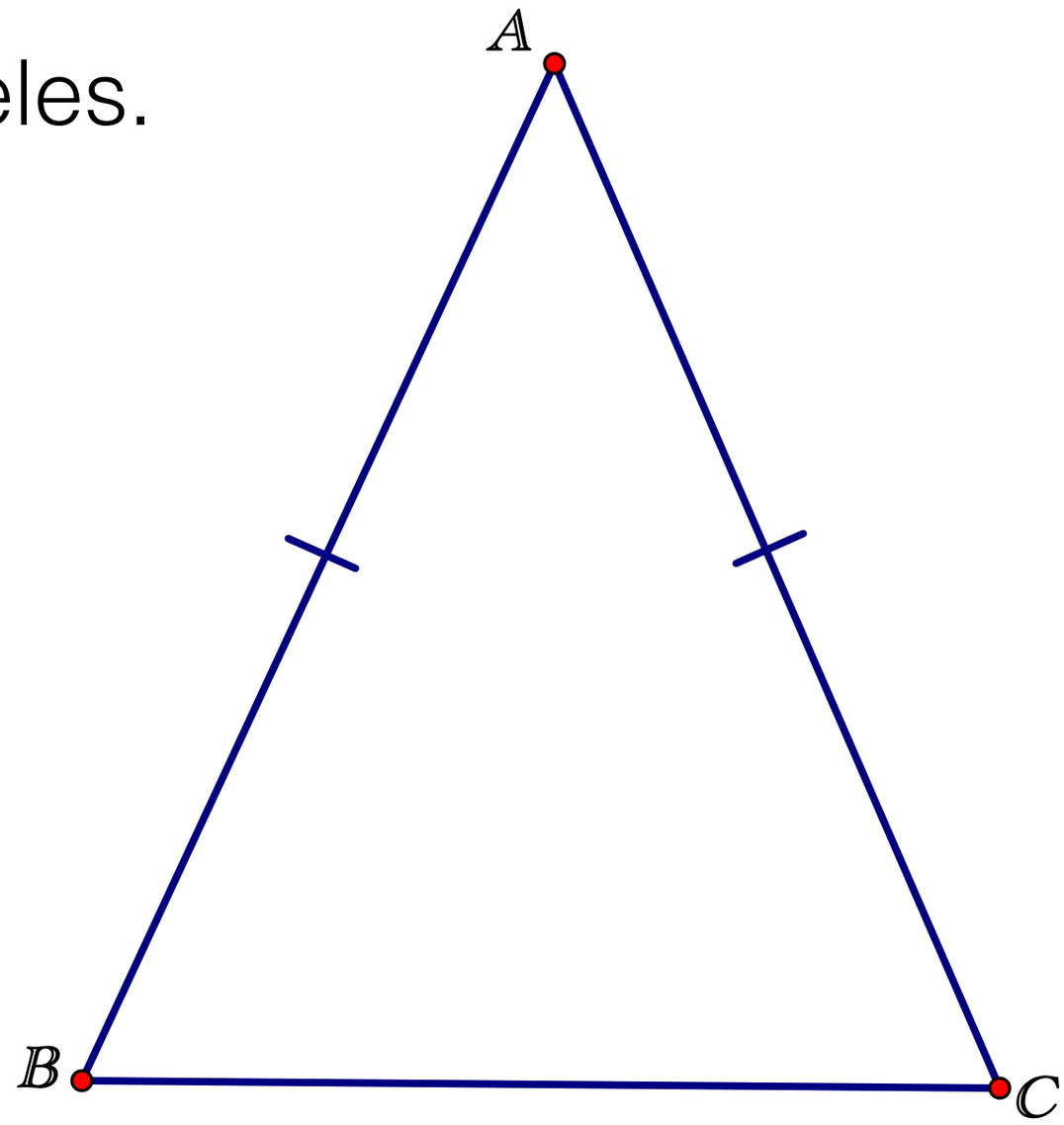
If a triangle is isosceles, then it has congruent base angles.

$$\angle B \cong \angle C$$



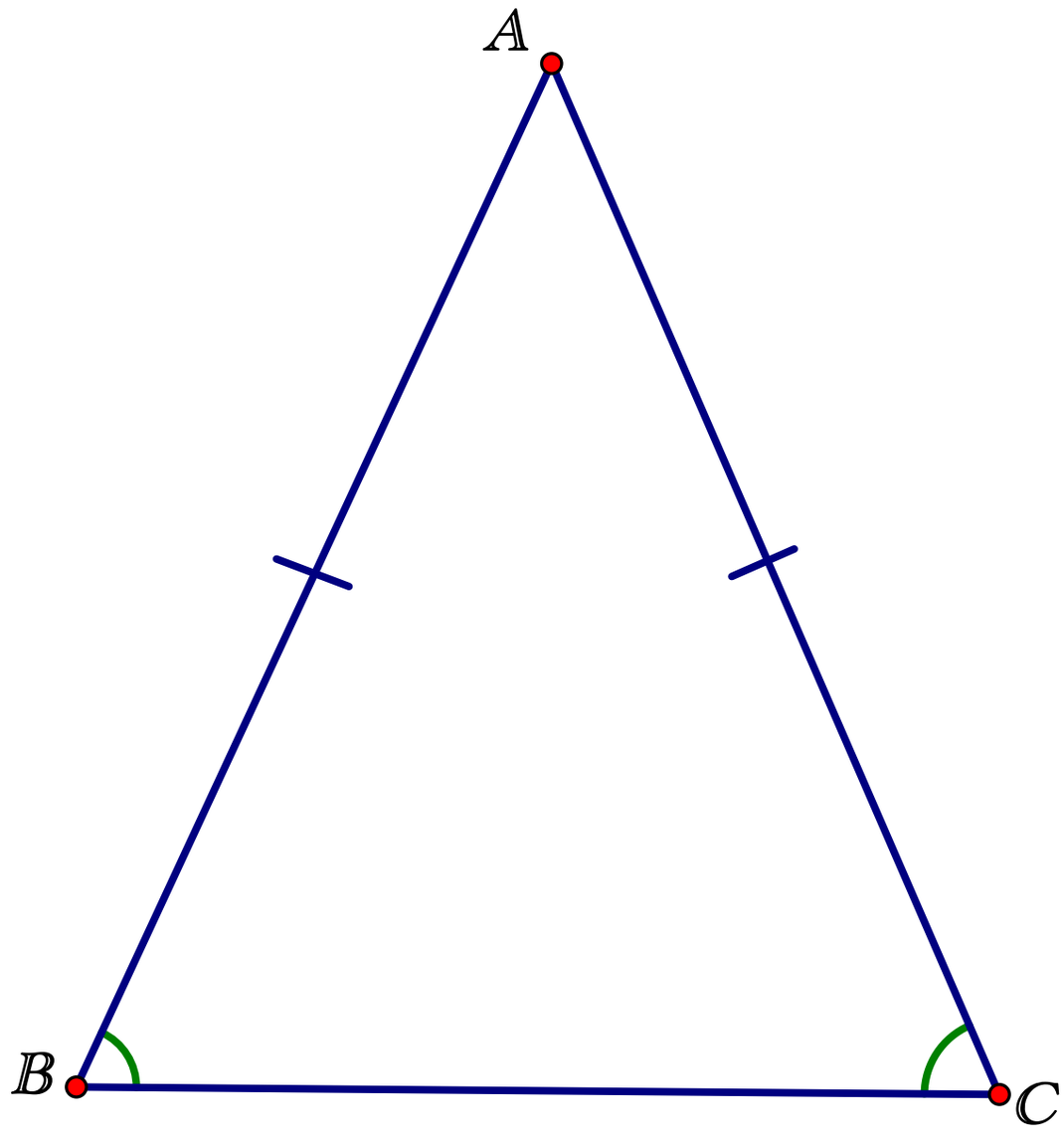
Proof of the Isosceles Triangle Theorem

Given: $\triangle ABC$ is isosceles.



Converse of the Isosceles Triangle Theorem

If a triangle has two congruent angles, then the triangle is isosceles.



Equilateral Triangles

Definition: An equilateral triangle is a triangle with three congruent sides.

*Equilateral triangles are equiangular, and vice versa.

$$\angle A \cong \angle B \cong \angle C$$