

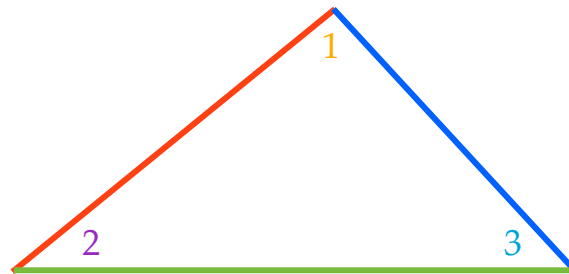
Exterior Angle Inequality Theorem

Exterior Angle

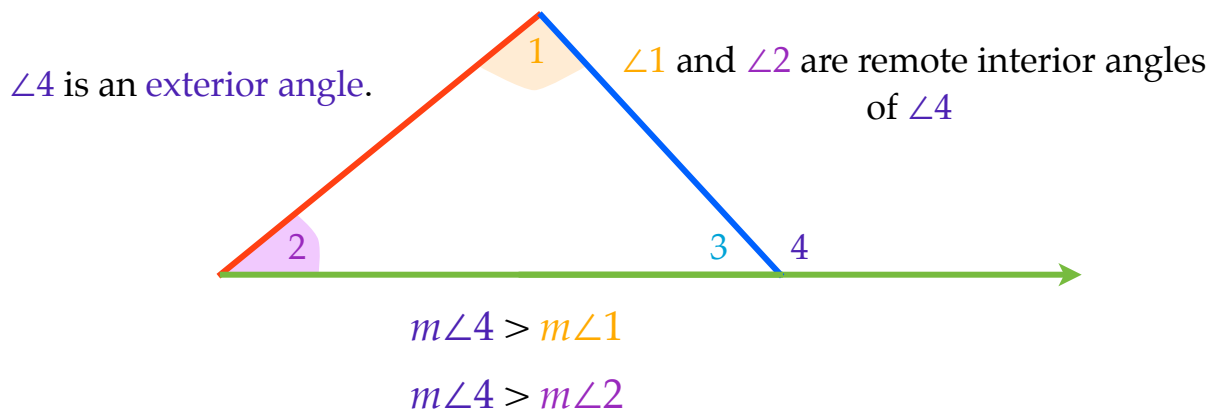
An exterior angle is formed by **one side** of a triangle and the **extension** of **another side**.

Remote Interior Angles

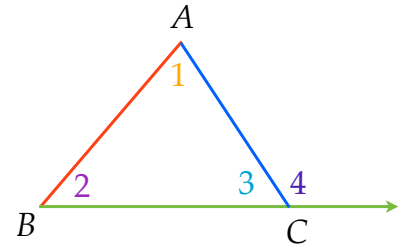
The remote interior angles are the non-adjacent angles to the given **exterior angle**.



The measure of an **exterior angle** of a triangle is greater than the measures of either of the **two remote interior angles**.

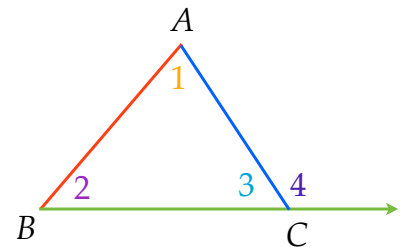


Step 2:

$$m\angle 4 > m\angle 2$$


Statements

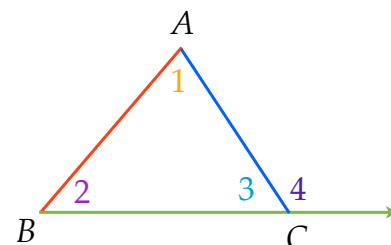
Reasons

$$m\angle 4 > m\angle 2$$


Case 2: $m\angle 4 < m\angle 1$

Given: $\triangle ABC$;
 $\angle 4$ exterior angle

Prove: $m\angle 4 > m\angle 1$
 $m\angle 4 > m\angle 2$



The measure of an exterior angle of a triangle is greater than the measures of either of the two remote interior angles.

