

## Angle Bisectors of a Triangle

Name \_\_\_\_\_

Date \_\_\_\_\_ Period \_\_\_\_\_

### Triangle

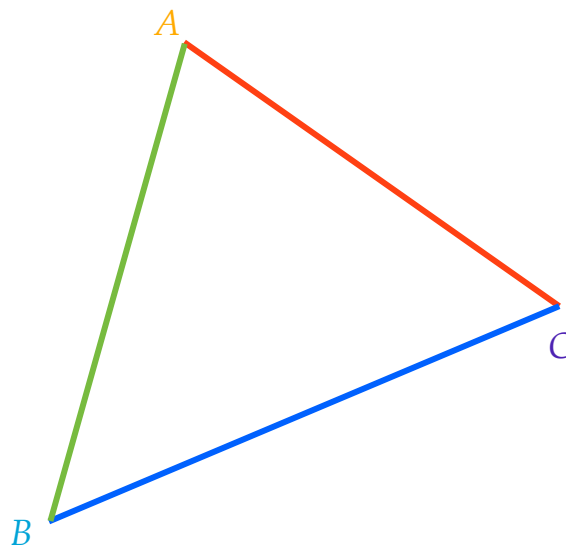
A **triangle** is a polygon with three sides.

3 Sides

3 Vertices

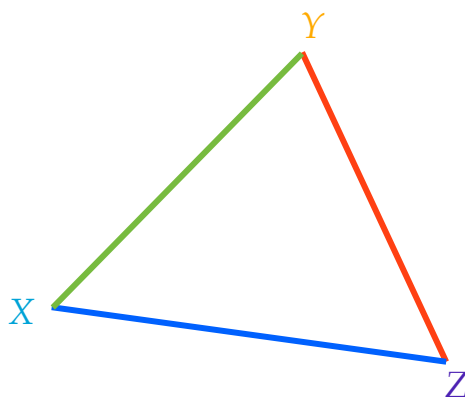
3 Angles

Name a Triangle using the 3 Vertices



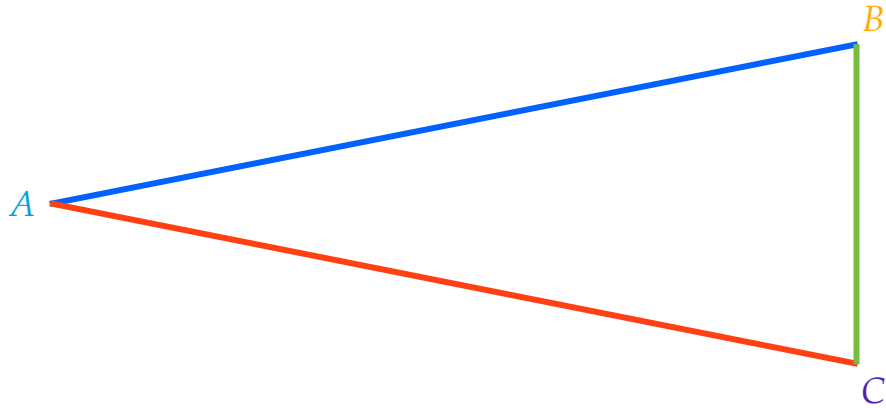
### Angle Bisector

Any line, ray, or segment that divides an angle into two congruent angles.



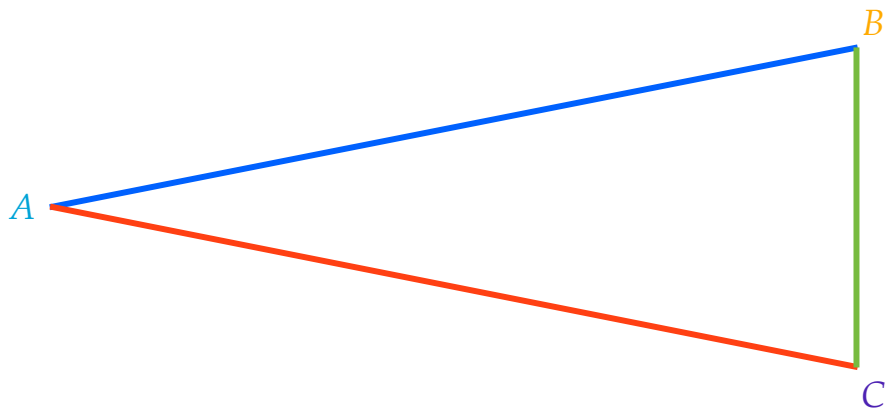
## Angle Bisector Theorem

Any point on an **angle bisector** is equidistant from the sides of the angle.



## Converse of Angle Bisector Theorem

Any point that is in the interior of an angle and is equidistant from the sides of the angle is on the **angle bisector** of the angle.

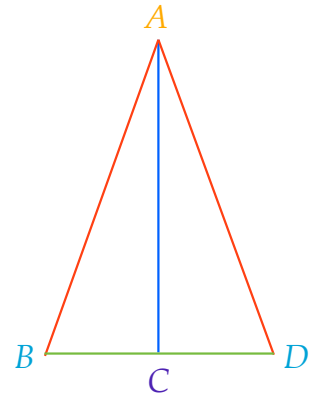


Statements	Reasons

Given: Isosceles  $\triangle ABD$   
with vertex  $\angle A$

$\overline{AC}$  bisects  $\angle A$

Prove:  $\overline{AC}$  is median of  $\triangle ABD$



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