Geometry

5.3 Use Angle Bisectors of Triangles

# Angle Bisector

angle

bisects

Ray that \_\_\_\_\_\_\_\_\_\_ an \_\_\_\_\_\_\_\_\_\_

## Angle Bisector Theorem

sides

Equidistant

Angle bisector

point

If a \_\_\_\_\_\_\_\_\_\_ is on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_ of the angle

## Converse of the Angle Bisector Theorem

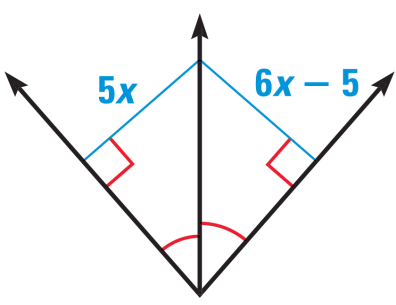
Angle bisector

sides

Equidistant

point

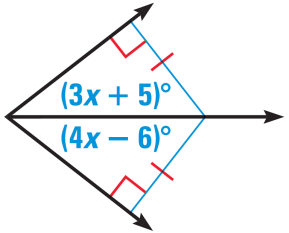
If a \_\_\_\_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_ of an angle, then it is on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find the value of x.

3x + 5 = 4x – 6

5 = x – 6

x = 11

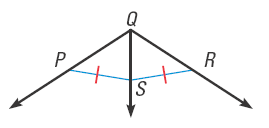


5x = 6x – 5

-x = -5

x = 5

Do you have enough information to conclude that bisects PQR?



No, you need to know that and

# Concurrency of Angle Bisectors of a Triangle

sides

equidistant

triangle

The angle bisectors of a \_\_\_\_\_\_\_\_\_\_\_\_\_ intersect at a point that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_\_\_ of a triangle

## Incenter

Angle bisectors

concurrency

* Point of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a triangle

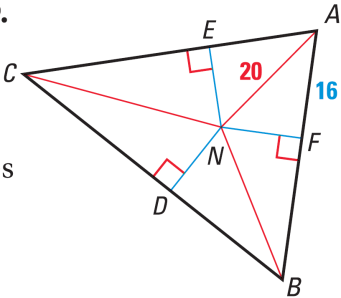
center

incenter

inscribed

* If a circle was \_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a triangle, the \_\_\_\_\_\_\_\_\_\_\_\_\_ would also be the \_\_\_\_\_\_\_\_\_\_\_ of the circle.

N is the incenter. Find EN



Assignment: 313 #2-24 even, 30, 34, 40-46 even = 18 total