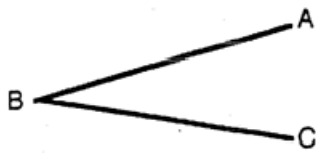


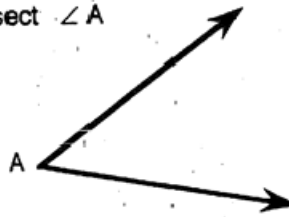
Constructions #1



OBJECTIVE: To bisect $\angle ABC$

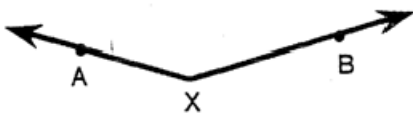


a. Bisect $\angle A$

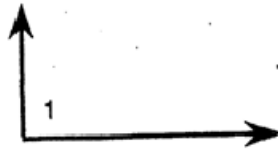


D

b) Bisect $\angle AXB$



c. Bisect $\angle 1$

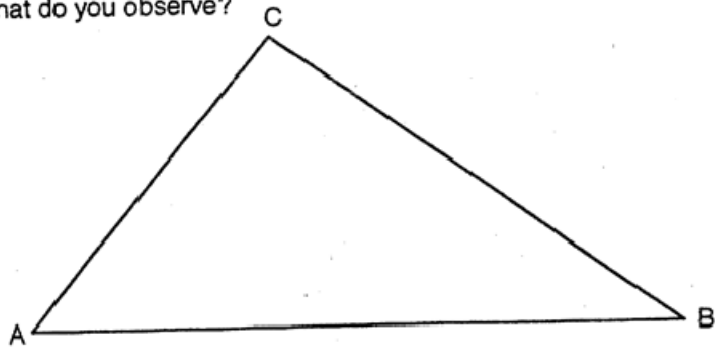


D

The angle bisector of a triangle is a segment that bisects an angle of the triangle and extends to the opposite side.

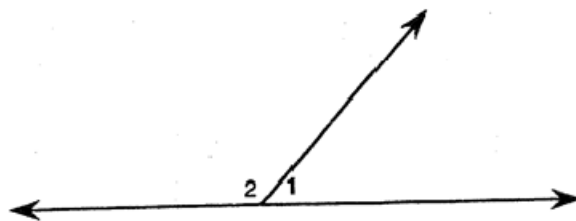
1. Construct each angle bisector.

a. What do you observe?



b. The point of intersection is the center of the largest circle that will fit into the triangle. Construct this circle.

2.



a. Bisect $\angle 1$

b. Bisect $\angle 2$

c. What angle is formed by the bisectors?

Constructions #2



TO CONSTRUCT A PERPENDICULAR TO A LINE AT A POINT ON THE LINE

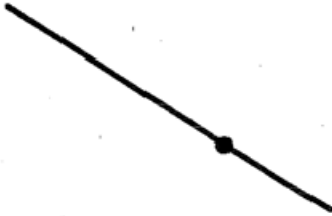
OBJECTIVE: CONSTRUCT A PERPENDICULAR TO \overleftrightarrow{AB} PASSING THROUGH C.



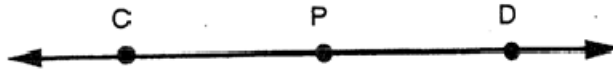
2.



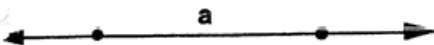
3.



4. Construct a perpendicular to \overleftrightarrow{CD} at point P on the line.

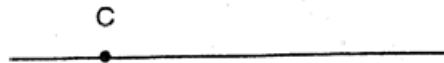


5. Construct a square with side a.



6. Construct a right triangle ABC where $\angle C$ is the right angle.

given: C ————— A
C ————— B

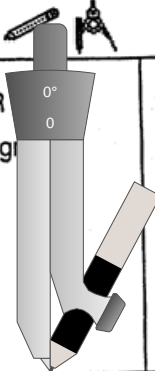


Constructions #3



PERPENDICULAR BISECTOR

Objective: Divide \overline{AB} into two equal segments.



1



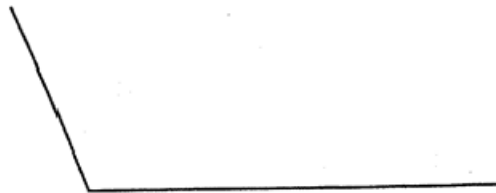
2



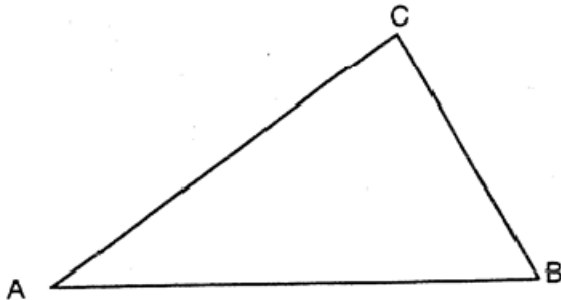
3



4. Construct a perpendicular bisector for each segment. Extend lines to meet at a point. Label the point Y.



5. Construct perpendicular bisectors of each side of the triangle.
a. What do you observe?



- b. Use point of intersection to draw smallest circle that will contain the triangle.