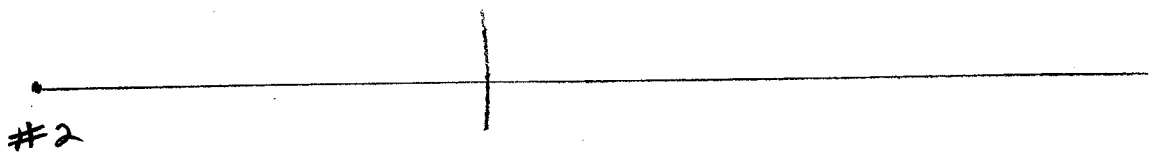
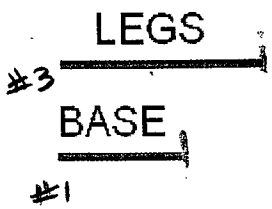
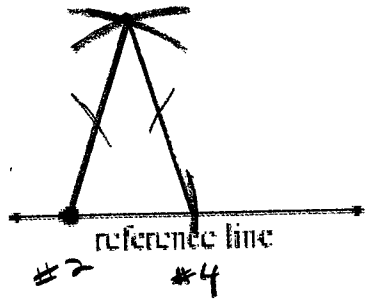
CONSTRUCTIONS

1. Construct a line segment congruent to AB

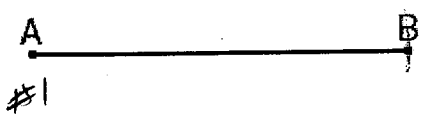


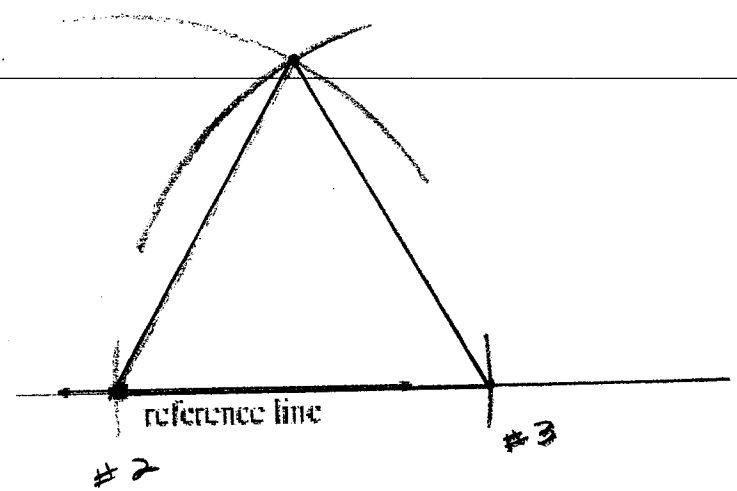
2. **Construct an isosceles triangle with the given lengths below.**



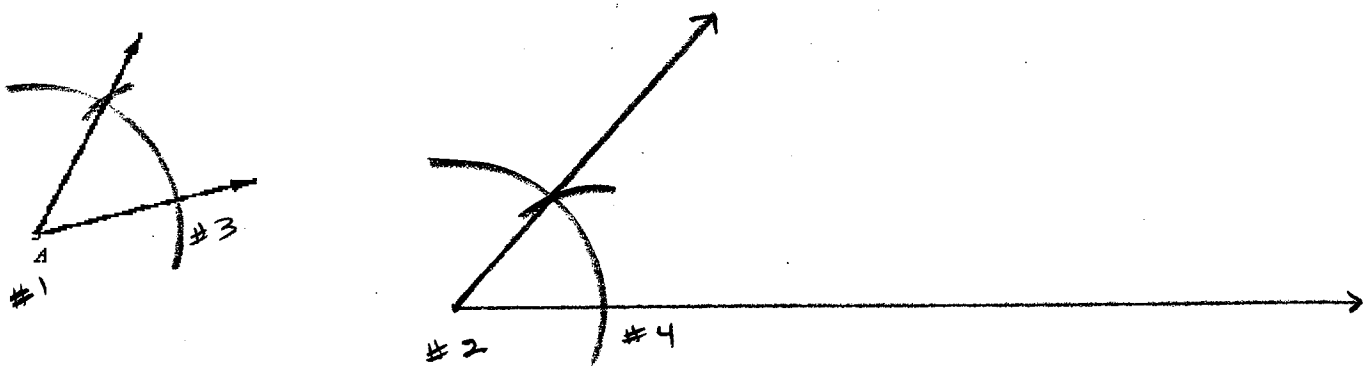


3. **Construct an equilateral triangle; all sides should have a length equal to AB**



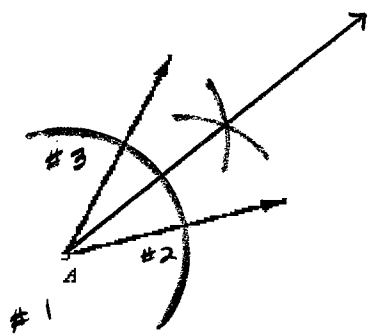


4. Construct an angle congruent to angle A

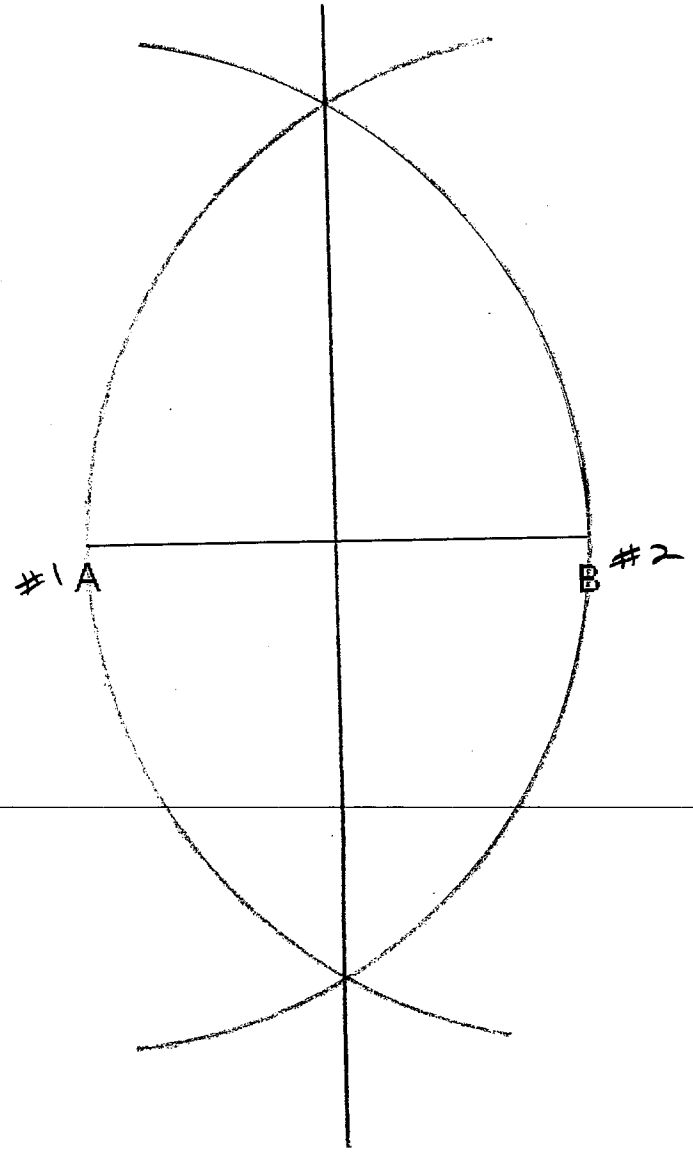


---

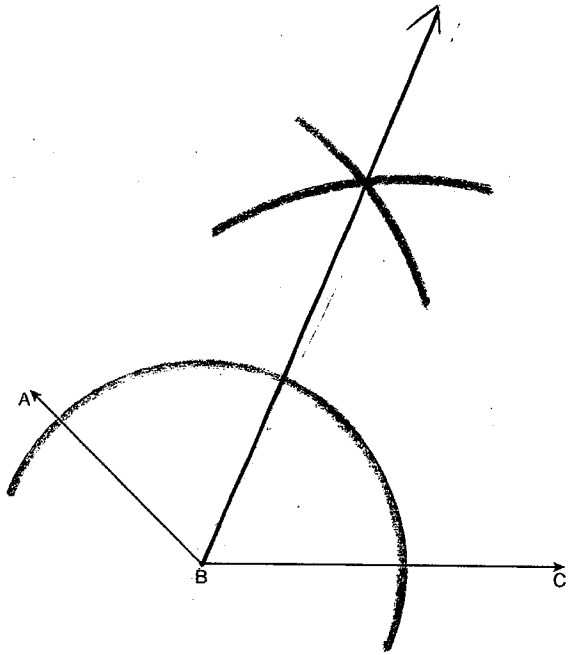
5. Bisect the given angle



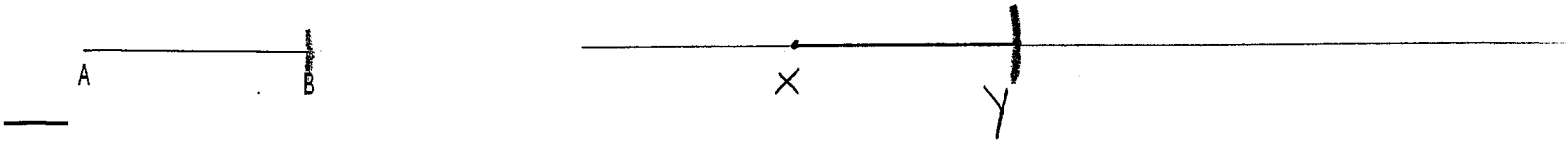
6. Bisect line segment AB



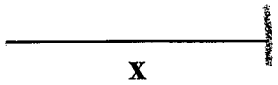
7. Bisect the given angle

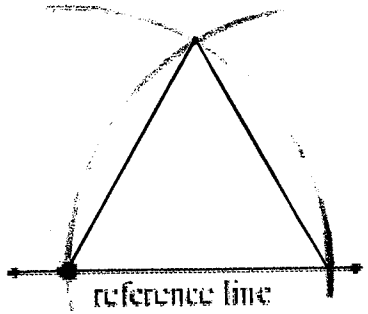


8. Construct a line segment congruent to AB and name it XY.

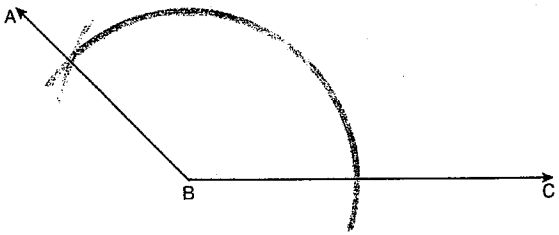


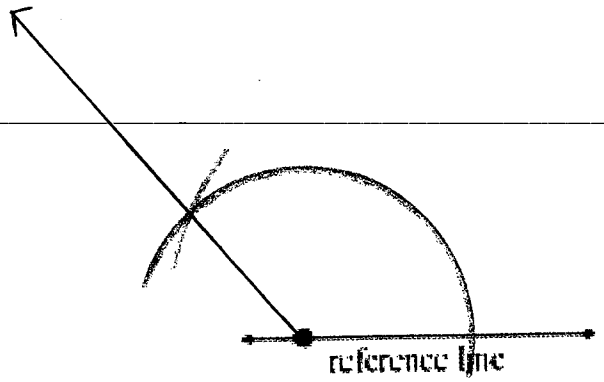
9. Construct an equilateral triangle with sides of length x.



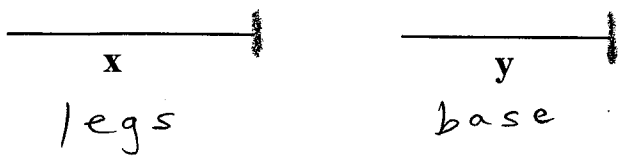


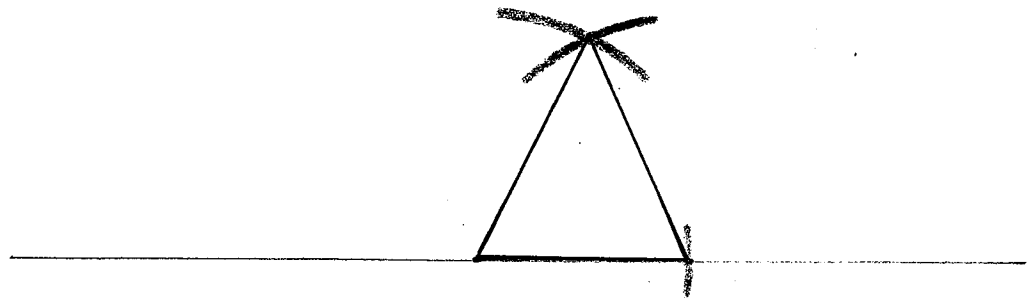
10. Copy the given angle.



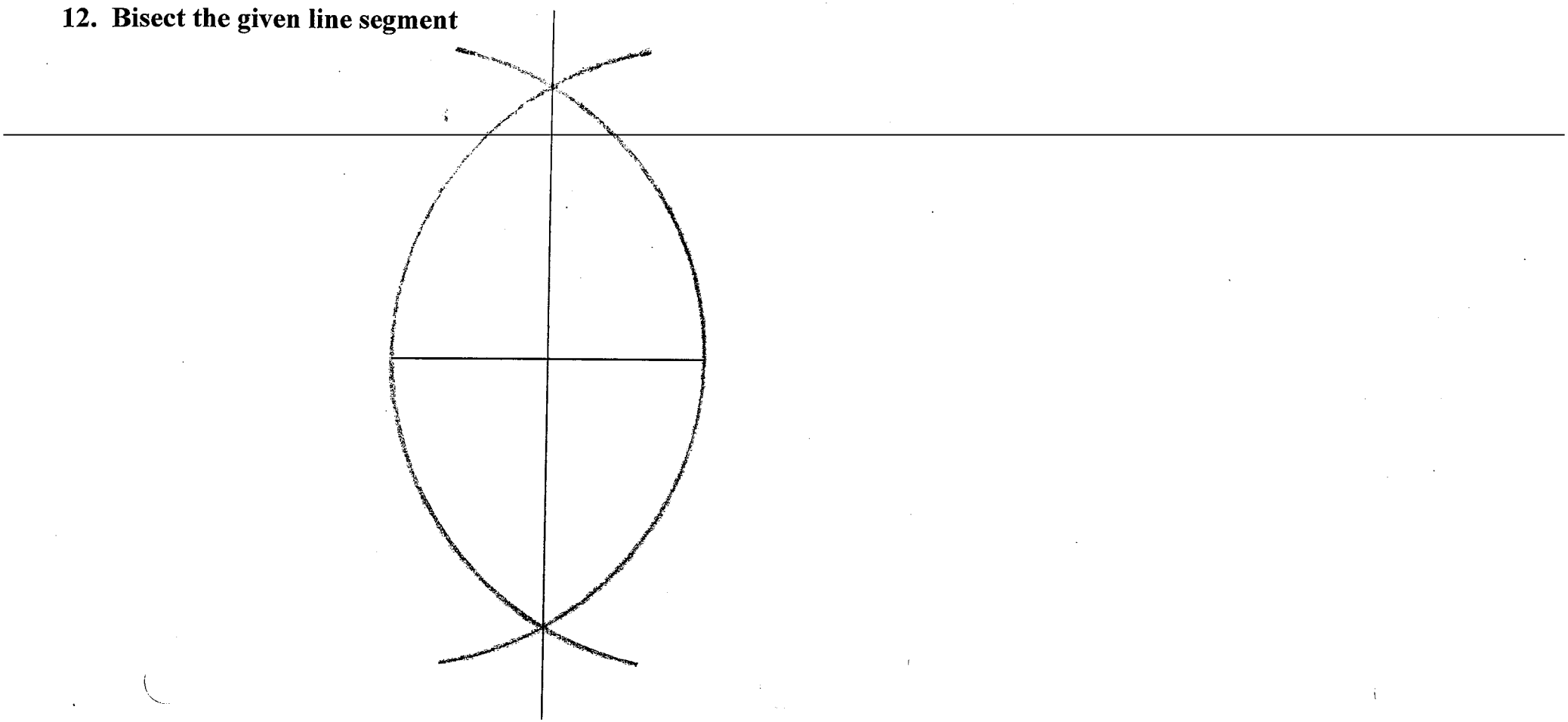


11. Construct an isosceles triangle with legs of length x and base of length y.



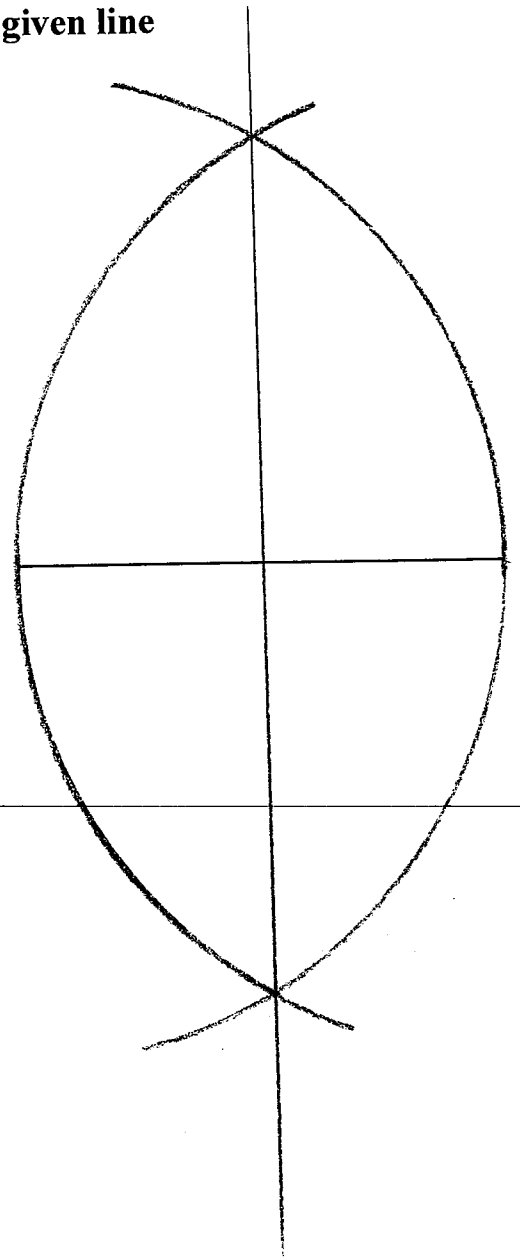


12. Bisect the given line segment

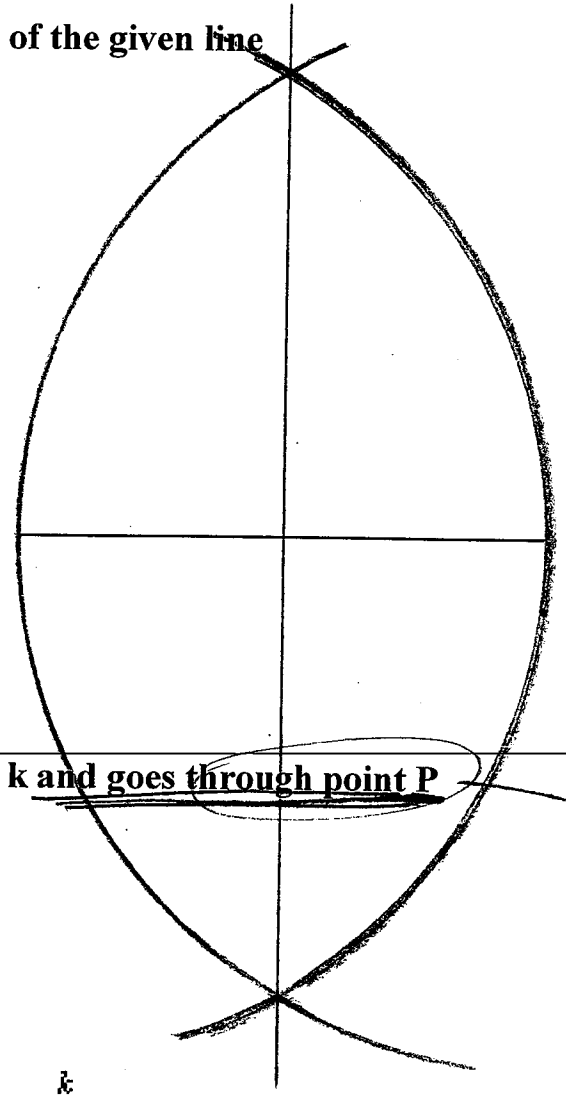


13. Construct a line perpendicular to the given line

Same construction
as bisect a segment
or find midpoint
or perpendicular
bisector

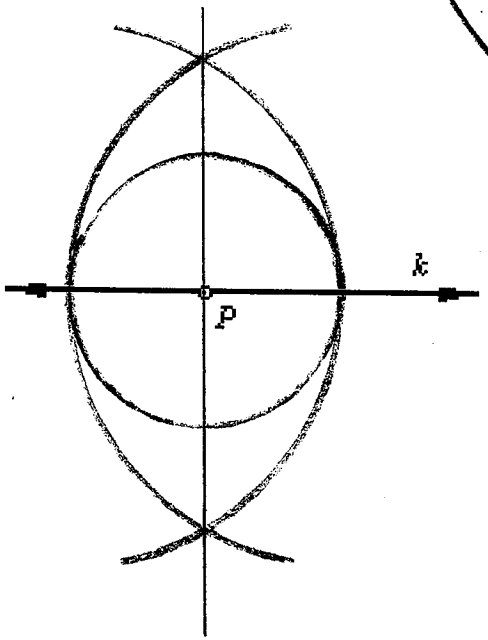


14. Construct the perpendicular bisector of the given line

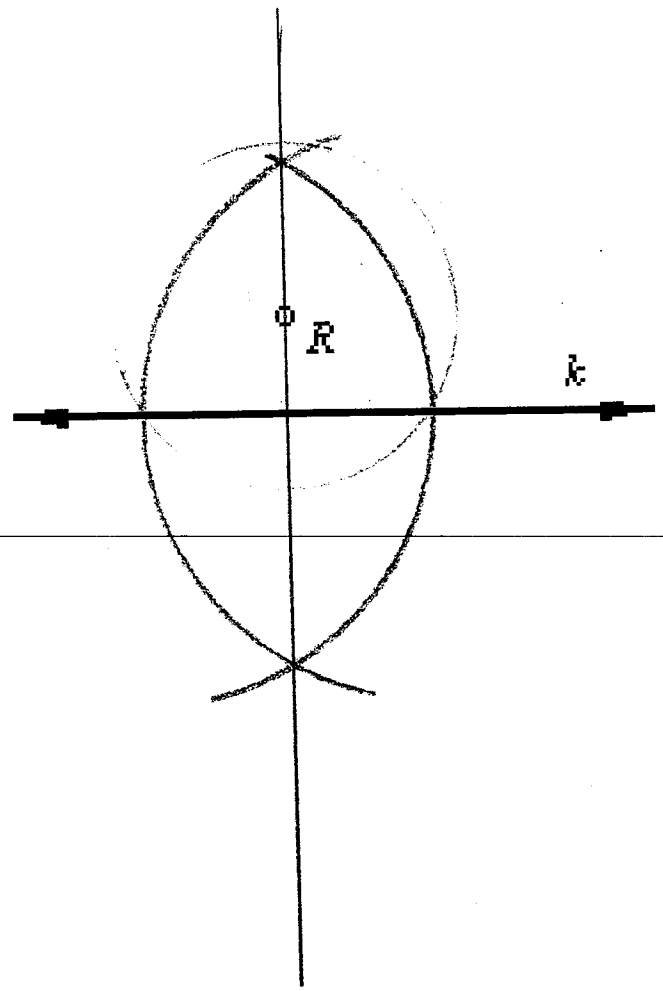


15. Construct a line perpendicular to line k and goes through point P

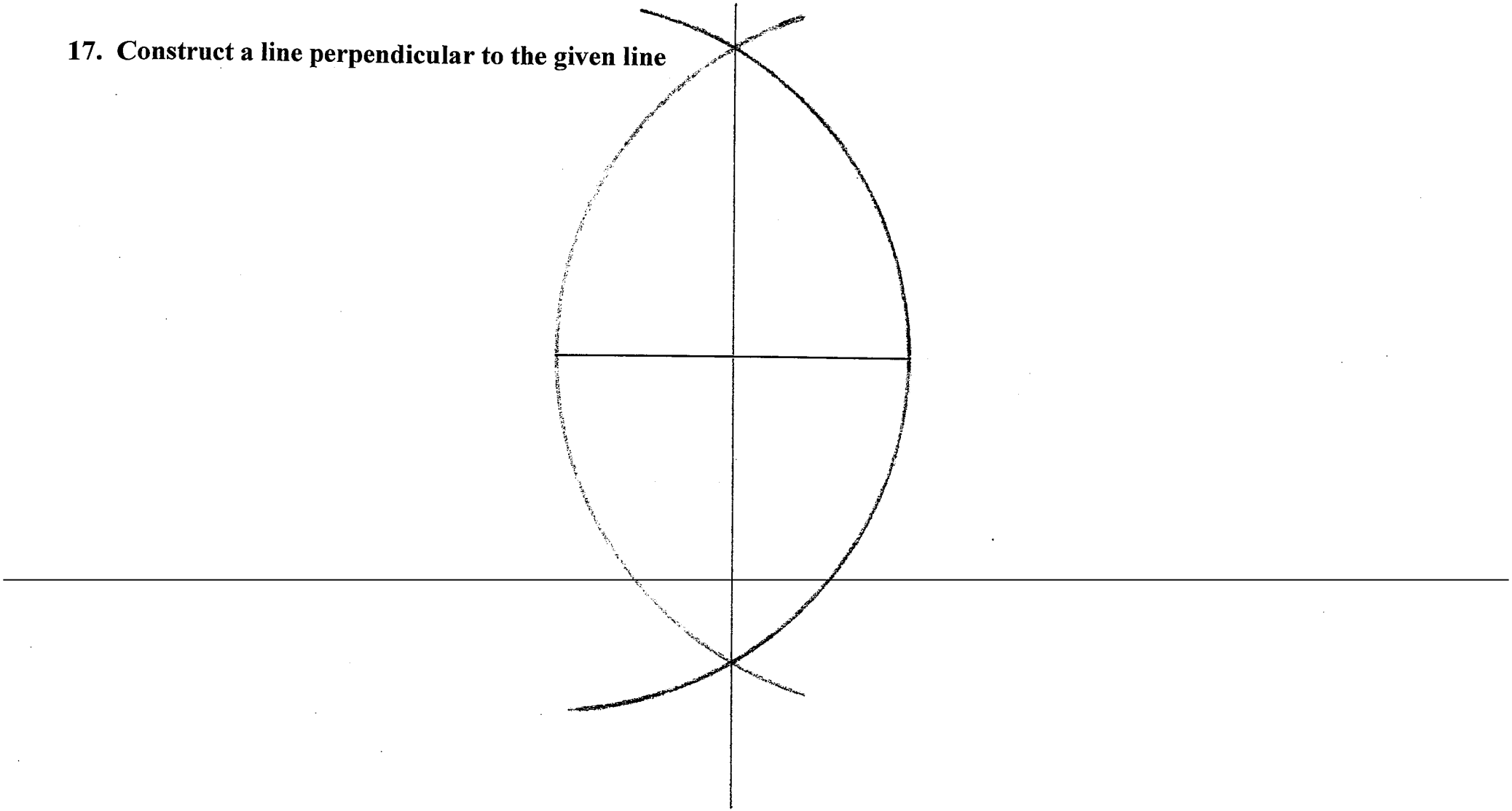
make a circle



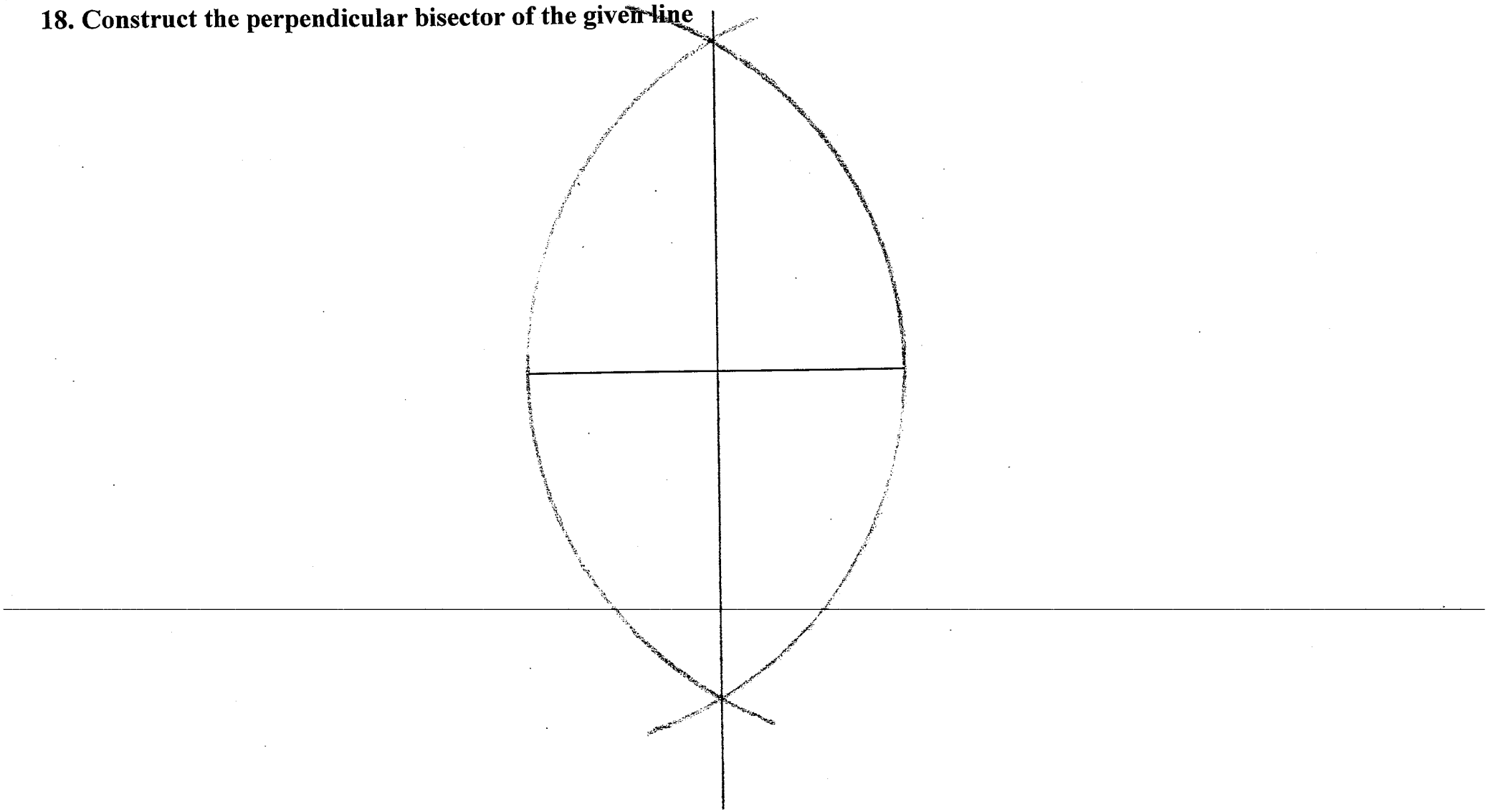
16. Construct a line perpendicular to line k and that goes through point R



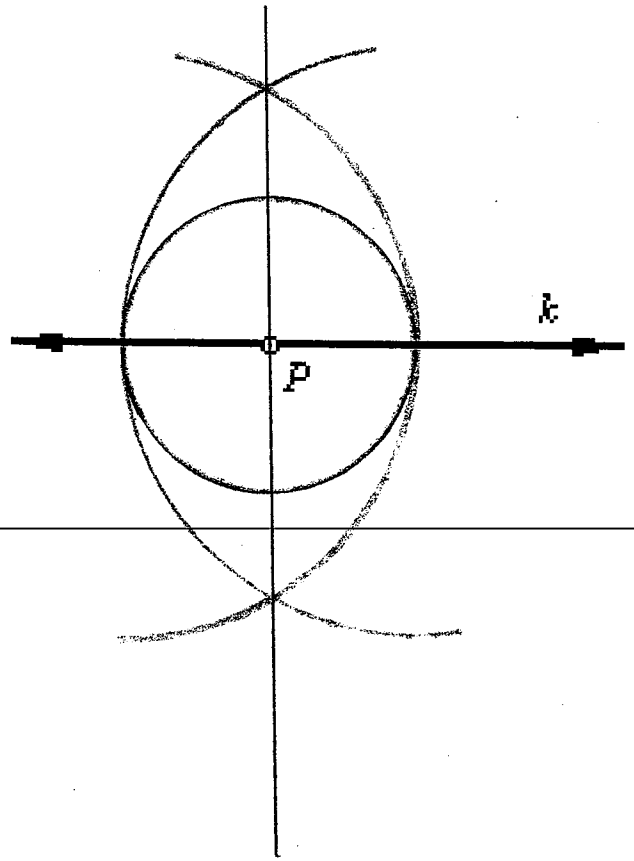
17. Construct a line perpendicular to the given line



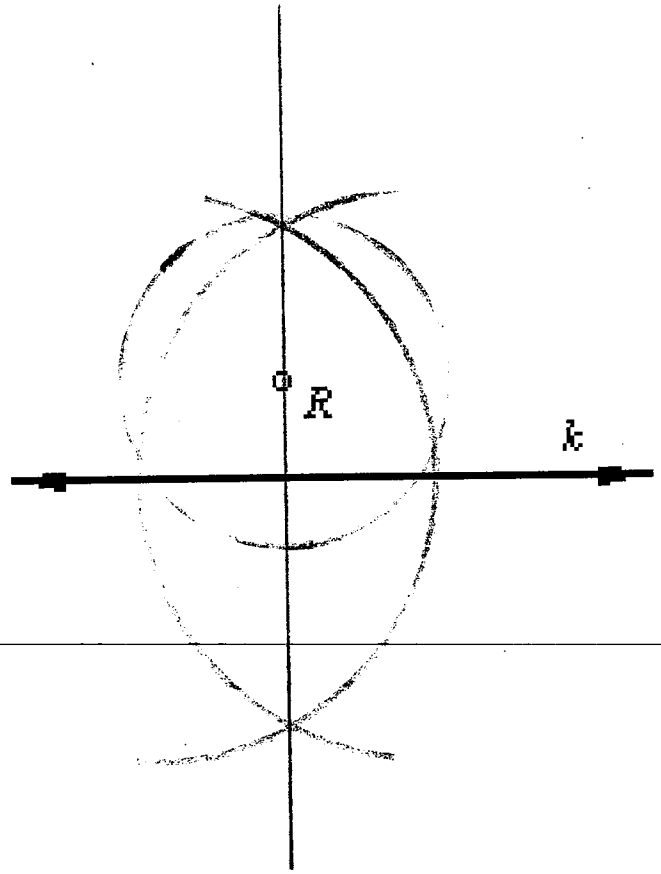
18. Construct the perpendicular bisector of the given line



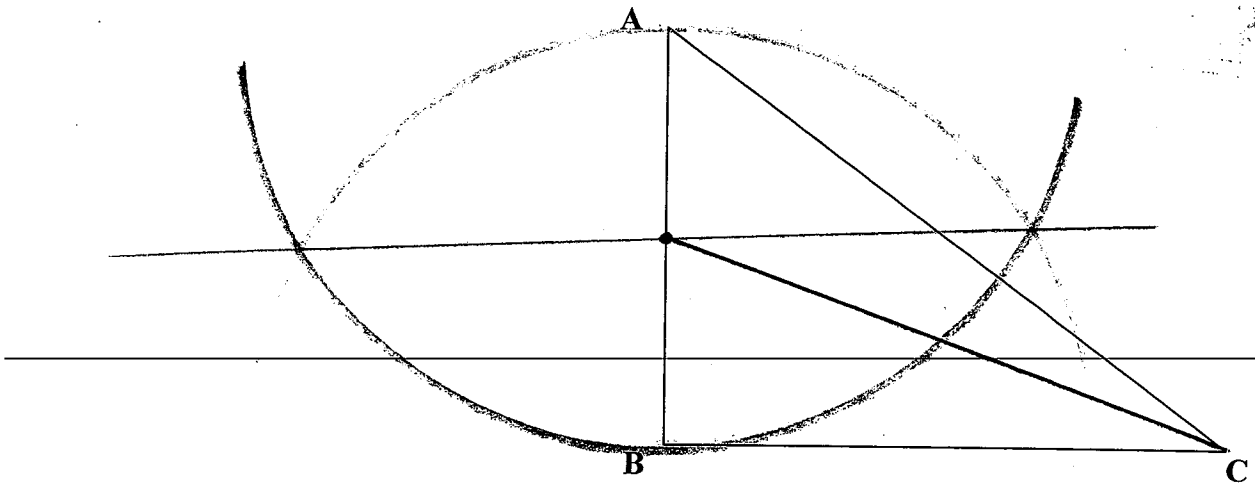
19. Construct a line perpendicular to line k and goes through point P



20. Construct a line perpendicular to line k and that goes through point R



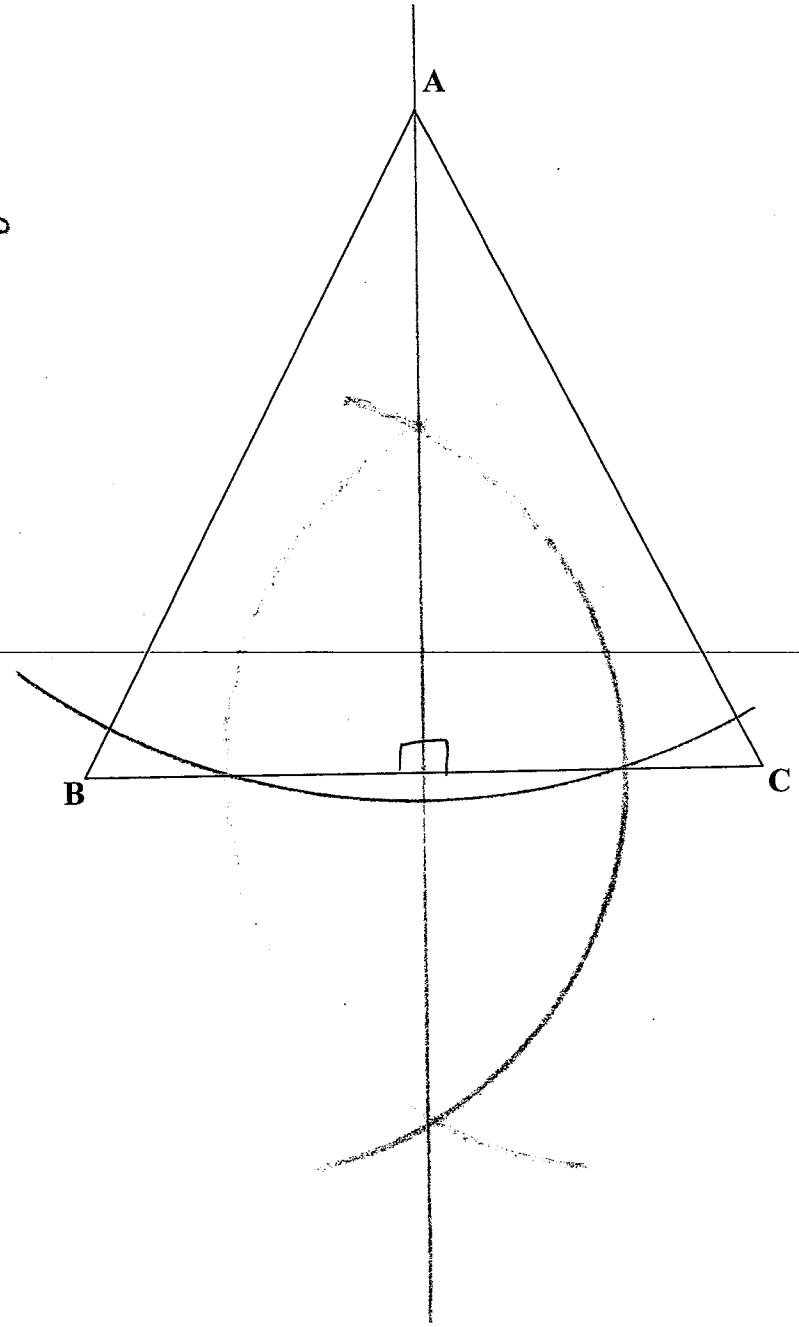
21. Construct a median from vertex C



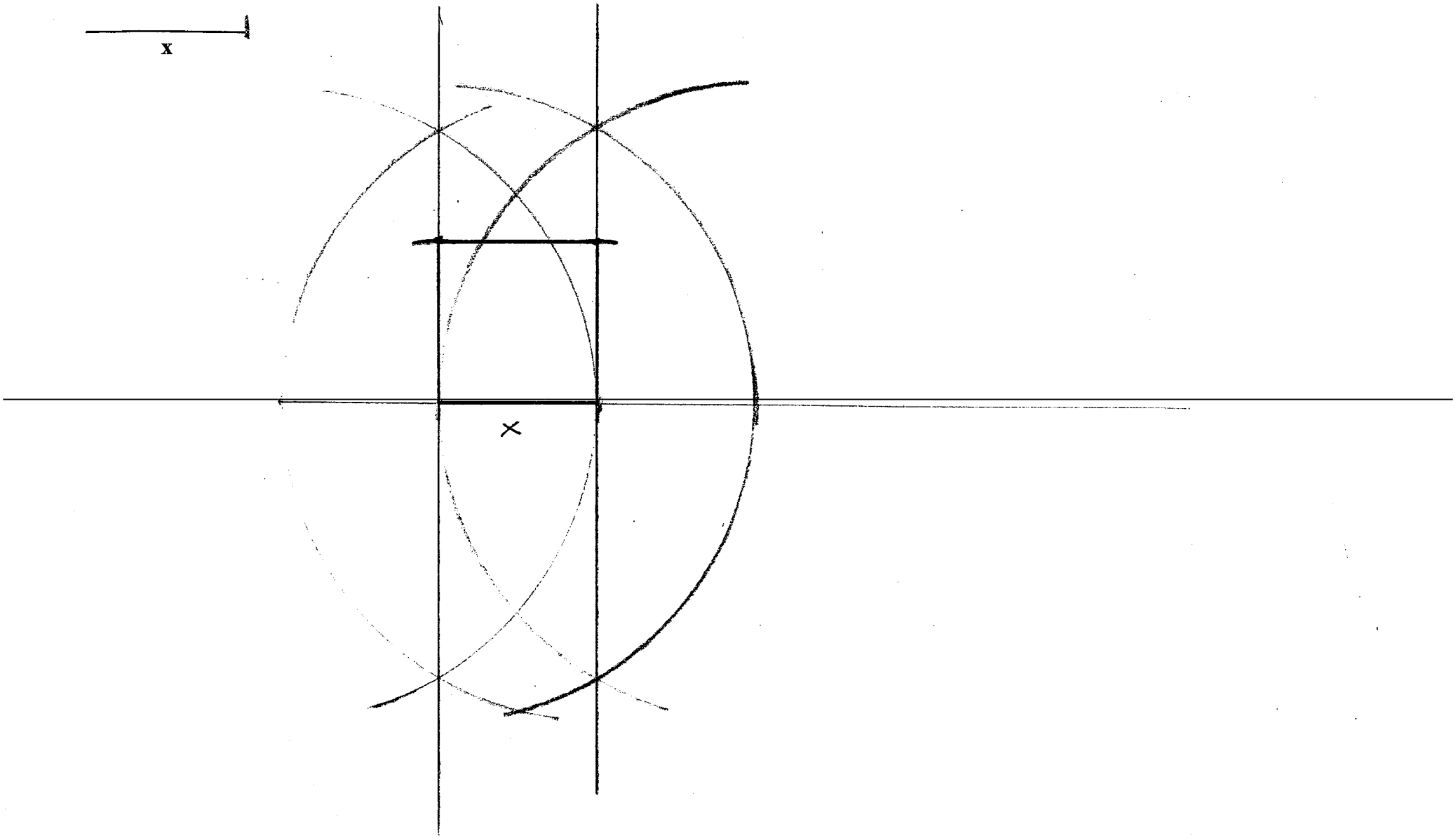
A median of a Δ is drawn from a vertex to the midpoint of the opposite side

22. Construct an altitude from vertex A

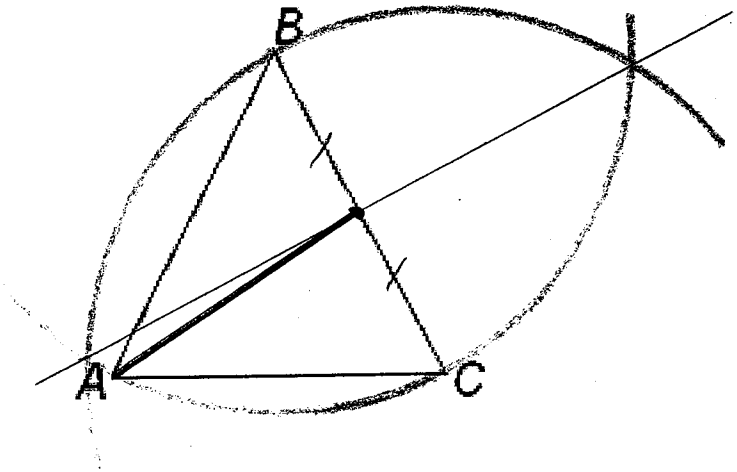
An altitude of a Δ is drawn from a vertex perpendicular to the opposite side forming right ∢'s



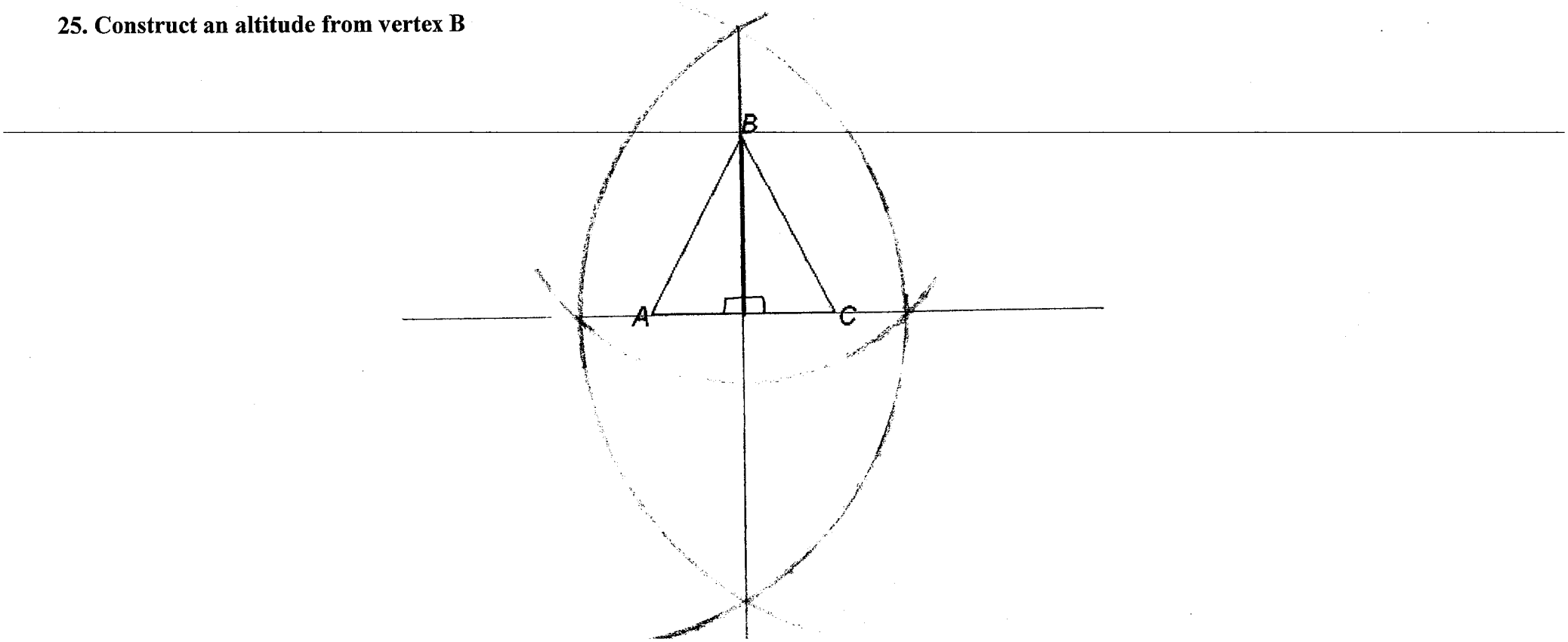
23. Construct a square with sides of length x



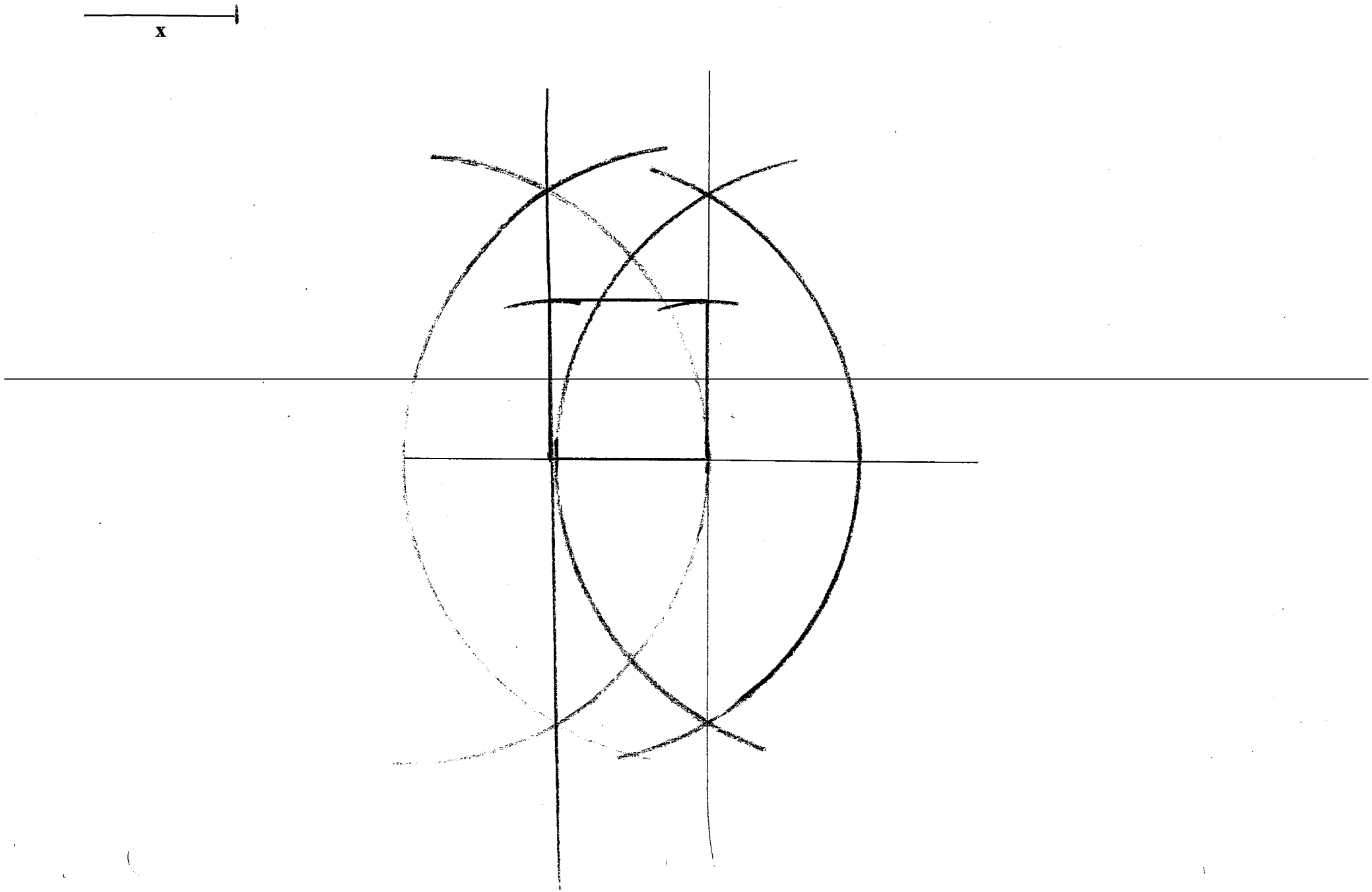
24. Construct a median from vertex A



25. Construct an altitude from vertex B

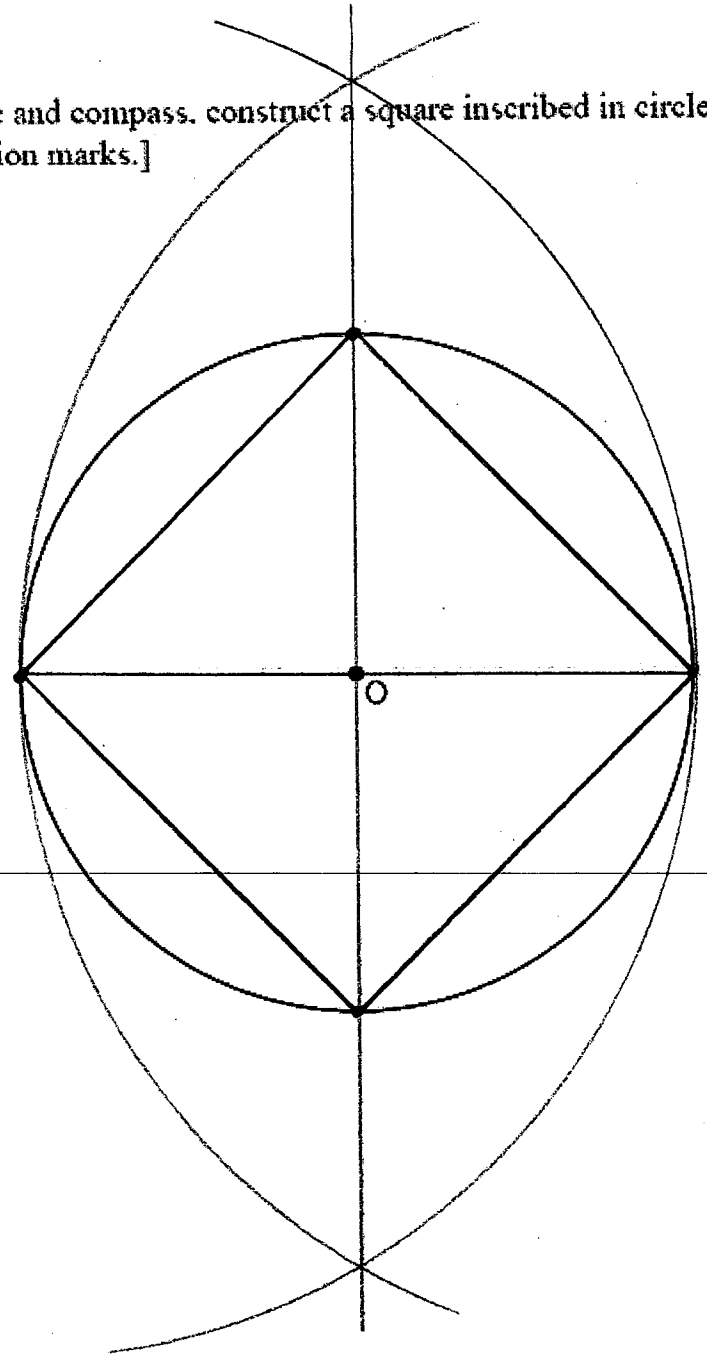


26. Construct a square with sides of length x on the reference line below.

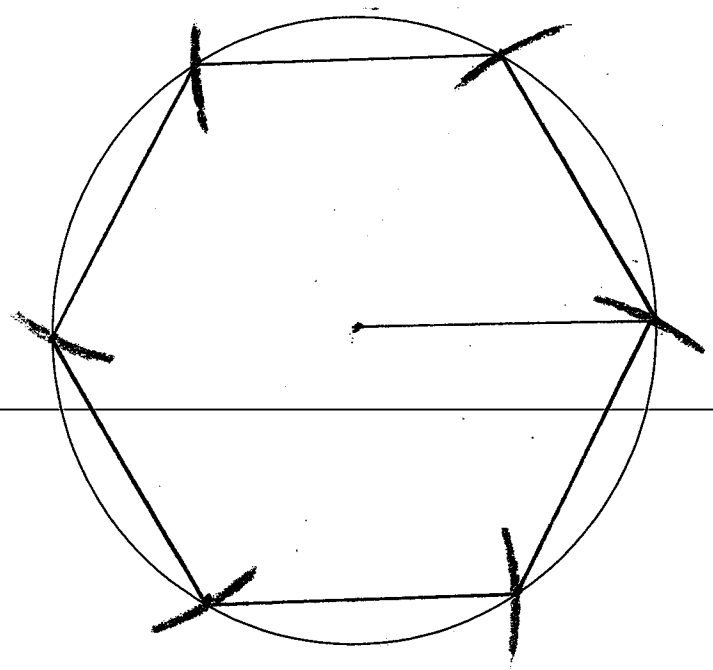


27.

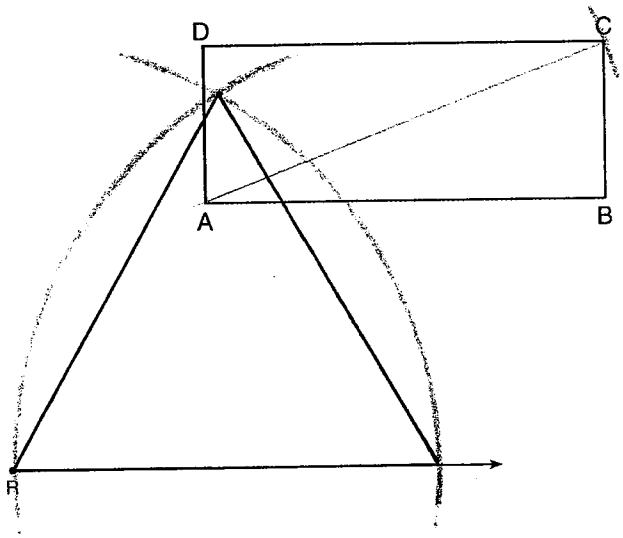
Using a straightedge and compass, construct a square inscribed in circle *O* below.
[Leave all construction marks.]



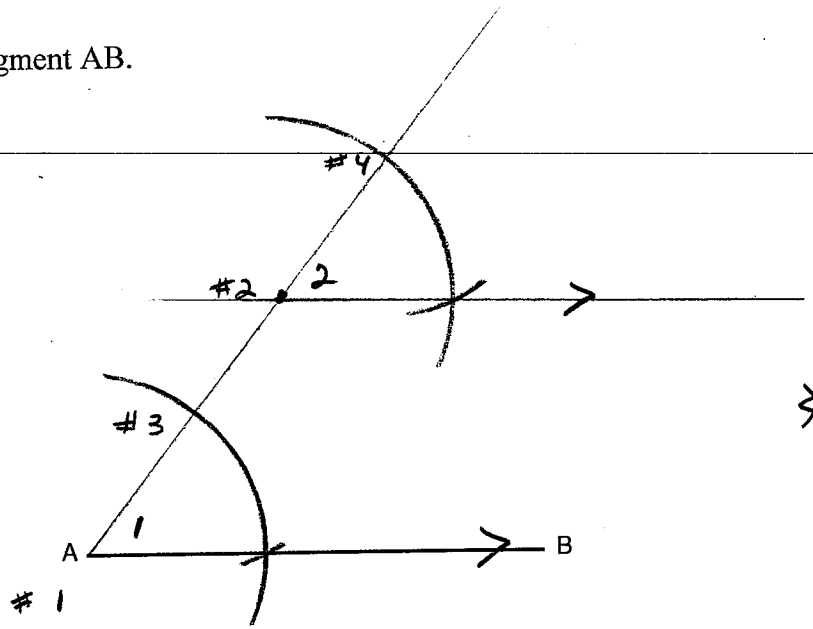
28. Construct a regular hexagon inscribed in the given circle.



29. On the ray drawn below, using a compass and straightedge, construct an equilateral triangle with a vertex at *R*. The length of a side of the triangle must be equal to a length of the diagonal of rectangle *ABCD*.

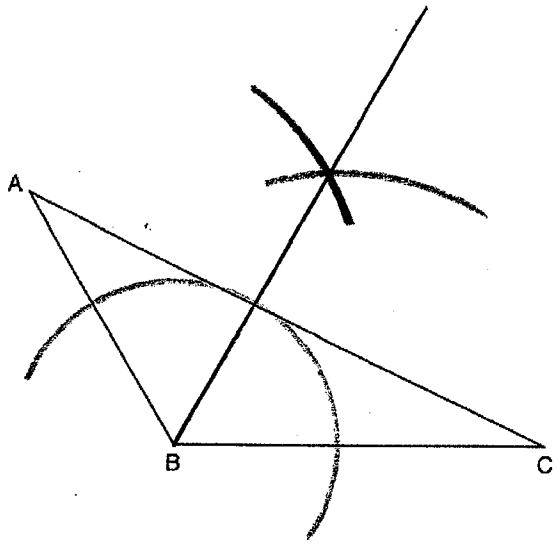


30. Construct a line parallel to line segment AB.

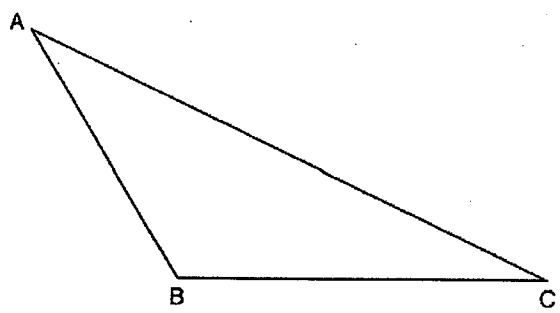


$\measuredangle 1 \cong \measuredangle 2$

31. . Bisect angle B

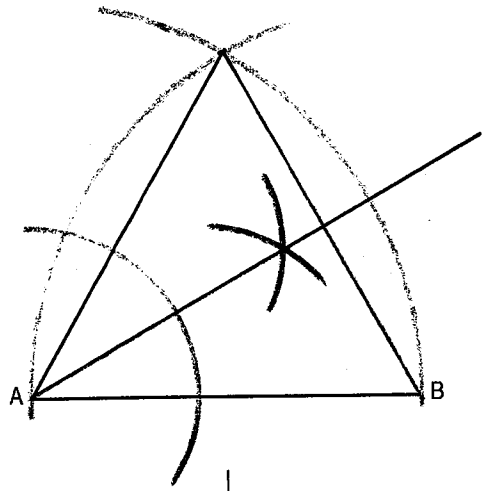


32. Construct a line parallel to line segment BC.

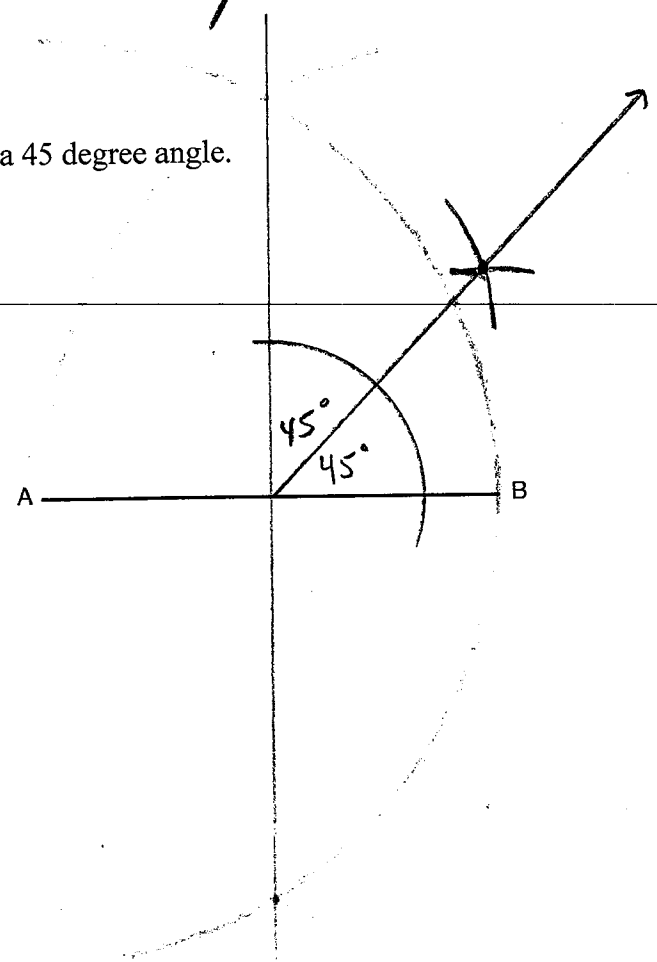


each ∡ = 60°

33. Using a compass and straightedge, construct an equilateral triangle with $\overline{AB}$ as a side. Using this triangle, construct a 30° angle with its vertex at A. [Leave all construction marks.]

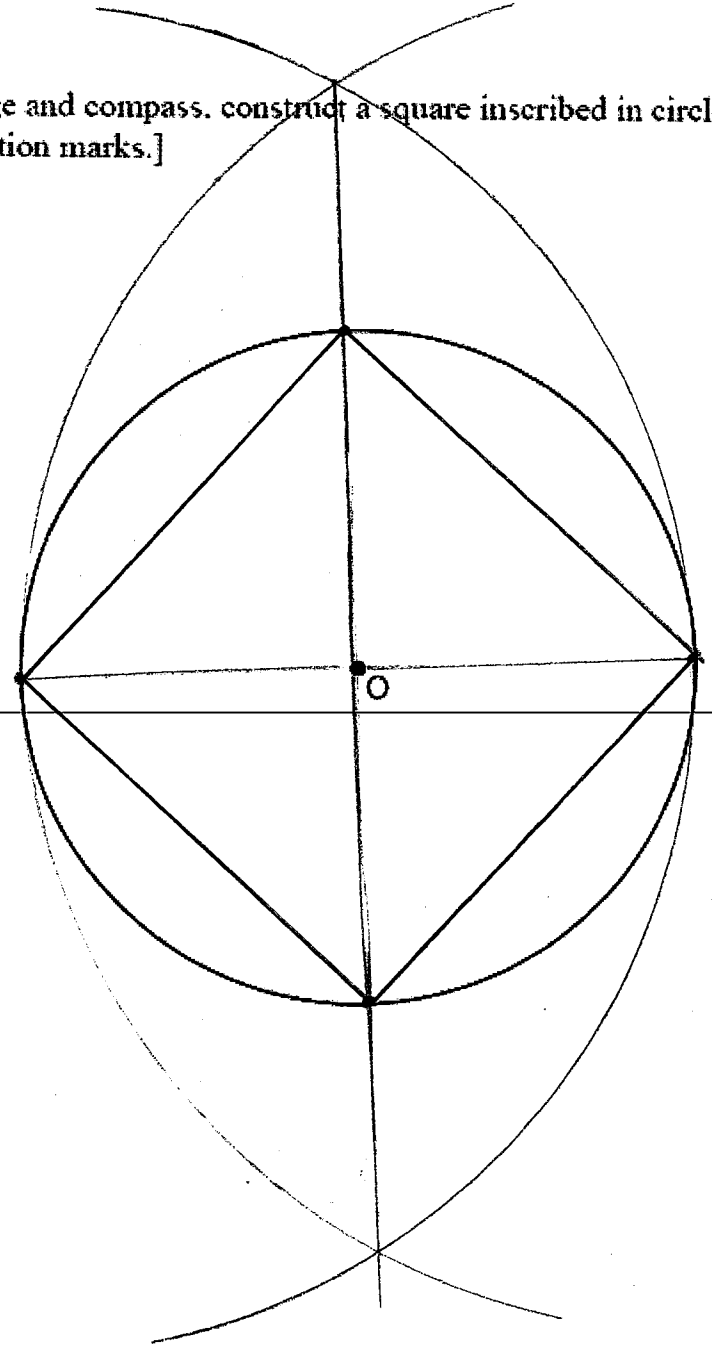


34. Using a compass and straightedge, construct a 45 degree angle.

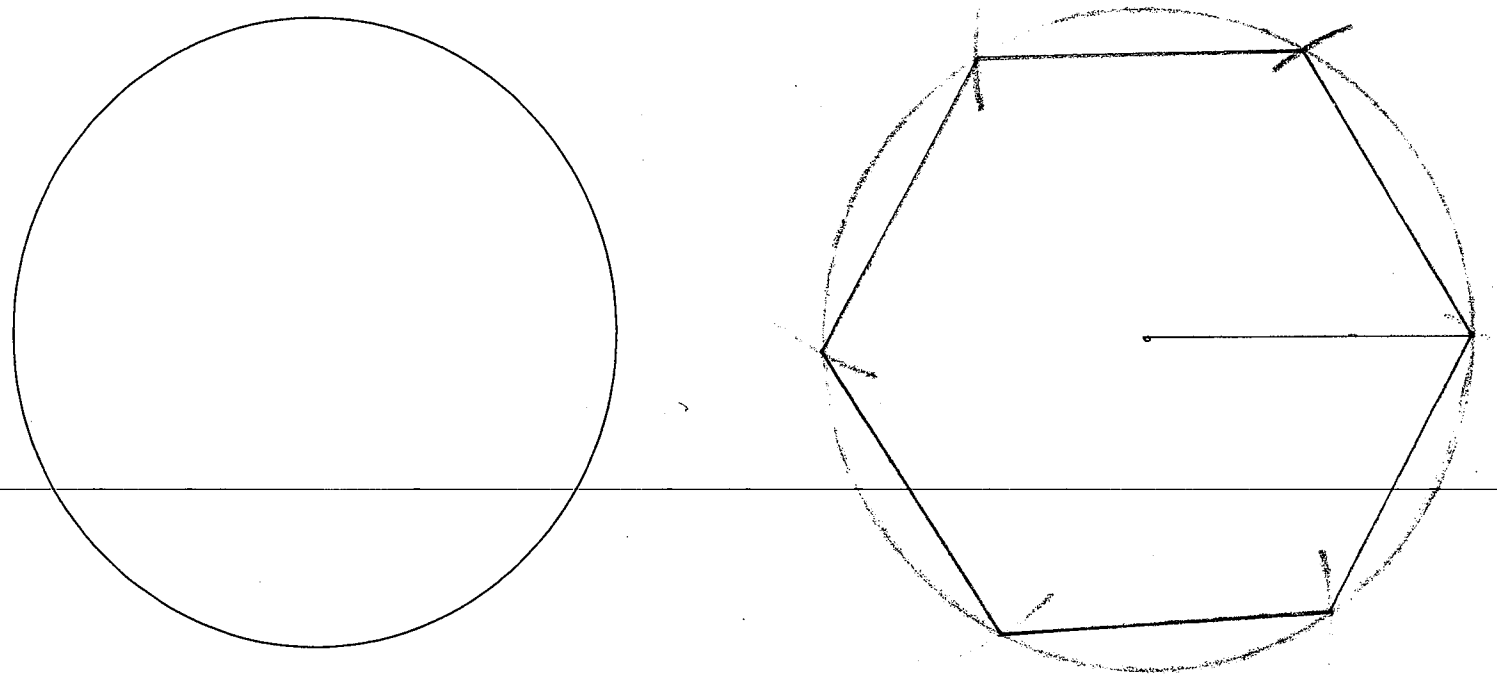


35.

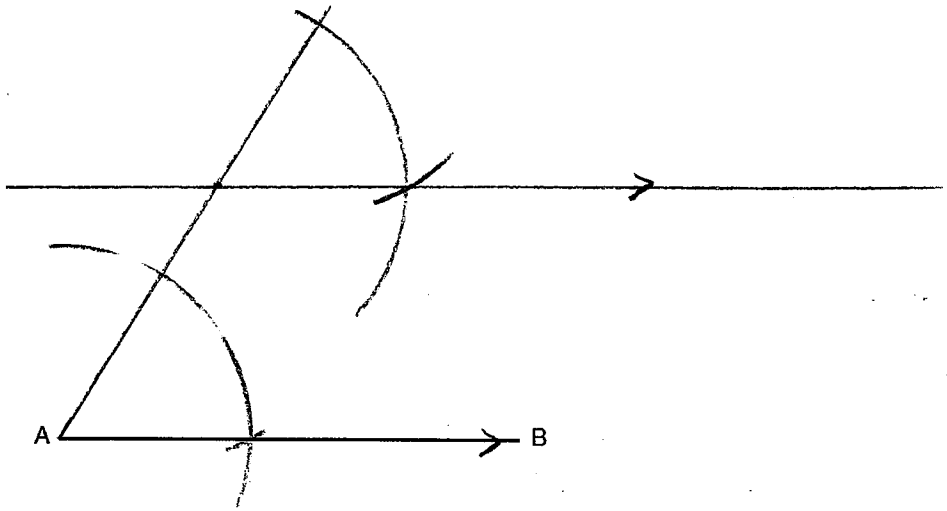
Using a straightedge and compass, construct a square inscribed in circle *O* below.
[Leave all construction marks.]



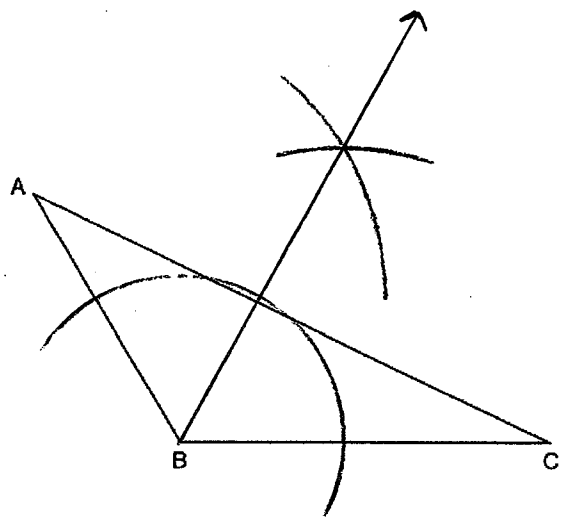
36. Construct a regular hexagon inscribed in the given circle.



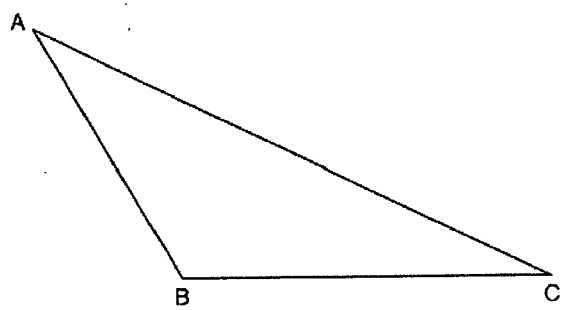
37. Construct a line parallel to line segment AB.



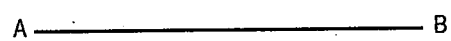
38. . Bisect angle B



39. Construct a line parallel to line segment AB.



40. Using a compass and straightedge, construct an equilateral triangle with $\overline{AB}$ as a side. Using this triangle, construct a 30° angle with its vertex at A. [Leave all construction marks.]



41. Using a compass and straightedge, construct a 45 degree angle.