

7. The locus of a point, such that the sum of its distances from two given intersecting st. lines equals a given line-segment, consists of the sides of a rectangle; and the locus of a point such that the difference of its distances from the intersecting st. lines equals the line-segment, consists of the produced parts of the sides of the rectangle.
8. Given the base of a $\triangle$ and the ratio of the other two sides, find the locus of the vertex.
9. AB is a fixed chord and AC a variable chord of a given circle; find the locus of the middle point of BC.
10. Find the locus of the points from which tangents drawn to two concentric circles are $\perp$ to each other.
11. Construct the locus of the centre of the circle of given radius which intercepts a chord of fixed length on a given st. line.
12. Find the locus of the centre of a circle of radius a which cuts a given circle at an $\angle A$.
13. A circle rotates about a fixed point in its circumference. Show that the locus of the points of contact of tangents drawn $\parallel$ to a fixed st. line consists of the circumferences of two circles.
14. In $\triangle ABC$, two circles touch AB at B and AC at C respectively and touch each other. Find the locus of their point of contact.
15. $\triangle$ s are described on a given base and having a given vertical $\angle$. Find the loci of the middle points of their sides.