

14. A triangle ABC is described, and on the other side of BC the triangle DBC is constructed with $DB=AB$ and $DC=AC$. AD is joined. What lines, angles and triangles are equal to one another? Give proof. What angles are right angles?

15. A triangle ABC is described, and on the other side of BC the triangle DBC is constructed with $DB=AC$ and $DC=AB$. AD is joined. What lines, angles and triangles are equal to one another? Give proof.

16. A triangle ABC is described, and on the same side of BC another triangle DBC is described with $DB=AC$ and $DC=AB$. AD is joined. What lines, angles and triangles in the figure are equal? Give proof.

If BA and CD be produced to meet in E, what are the triangles EAD, EBC? Give reasons.

17. From two lines diverging from A, equal lengths AB, AC are cut off, and also equal lengths AD, AE. CD, DE, BC and DE are joined. What lines, angles and triangles in the figure are equal? Give proof.

18. Two circles have the same centre O. AOB is a diameter of one, and COD a diameter of the other. AC and BD are joined. What lines, angles and triangles in the figure are equal?

19. Equal lines AB, AC are drawn, making equal angles with AE on opposite sides of it. At B and C equal angles ABF, ACG are constructed towards the same side. If AE, BF and CG be produced, will they hit the same point? Give proof.

20. Describe ABC, DBC, two isosceles triangles on the same base BC, but on opposite sides of it. How does AD divide the angles BAC, BDC? Give proof.

21. With centres A and B two circles are described, intersecting at C and D. How are the angles CAD, CBD divided by AB? How is CD divided by AB? What are the angles at the intersection of AB and CD? Give proof.

22. Construct an equilateral triangle ABC. At B and C construct equal angles GBC, GCB. Join AG. How does AG divide the angle BAC? Give proof.