

Or again, we may prove the equality of the angles as follows: The triangles **DAF**, **EAF** have their sides equal. Hence (Ch. III., 1) the angles **DAF**, **EAF** are equal.

In practice it is not necessary to draw the lines **DF**, **EF**.

A number of exercises should be given in bisecting angles of various magnitudes, the bevel being used in each case to determine whether the bisection is accurate.

The protractor may also be used for bisecting angles.

It is suggested that the pupil be given exercises in estimating with the eye the bisecting lines of a number of angles, the bisection being afterwards accurately reached by geometrical construction.

Greater accuracy is likely to be secured in bisecting an angle, by making **AD**, **AE** and **DF**, **EF** of considerable length. The point **F** is then remote from **A**, and any trifling error in locating the exact point where the circles intersect, has less effect on the angle at **A** through being on the circumference of a large circle (radius **AF**).

3. From a point in a line to draw a line at right angles to it.

If **C** be the point in **AB** from which the perpendicular is to be drawn, place one point of the dividers or compasses at **C**, and mark off equal lengths **CD** and **CE**. Then with centres **D** and **E** describe portions of circles with equal radii, intersecting at **F**. Draw **FC**: it is perpendicular to **AB**.

