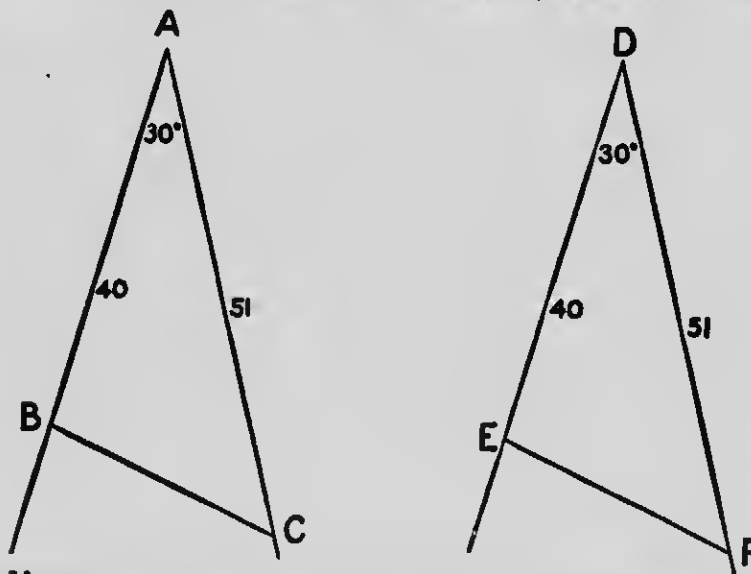


The result of our observations in these cases is that if two triangles have their sides equal, the angles which are opposite to equal sides are equal, and the areas are equal. In other words two such triangles are the same triangle in different positions.

Another way of stating the fact is to say that if the sides of a triangle are fixed, the angles are fixed, and the area is fixed.

2. Construct two angles, BAC and EDF , each of 30° . On sides of these angles measure off distances AB and DE , each of length 40 millimetres; and also distances AC and DF , each of length 51 millimetres. Join BC and EF , thus forming two triangles, ABC and DEF .



Adjust the bevel, or protractor, to the angle B , and also to the angle E , and carefully compare the magnitudes of these two angles. In like manner compare the magnitudes of the angles C and F . With the dividers compare the magnitudes of the sides BC and EF .