

2. And they contain the angle FAG, common to the two triangles AFC, AGB.

3. Therefore the base FC is equal to the base GB. (*Prop. 4, Book I.*)

4. And the triangle AFC to the triangle AGB. (*Prop. 4, Book I.*)

5. And the remaining angles of the one are equal to the remaining angles of the other, each to each, to which the equal sides are opposite.

Viz.: The angle ACF equal to the angle ABG, and the angle AFC equal to the angle AGB. (*Prop. 4, Book I.*)

6. And, because the whole AF is equal to the whole AG, (*Construction 2.*) of which the parts AB, AC, are equal. (*Hypothesis 1.*)

The remainder BF, is equal to the remainder CG. (*Axiom 3.*)

7. And FC was proved to be equal to GB. (*Demonstration 3.*)

8. Therefore the two sides BF, FG, are equal to the two sides CG, GB, each to each.

9. And the angle BFC was proved to be equal to the angle CGB, (*for the angle AFC was proved equal to the angle AGB. Demonstration 5.*)

10. And the base BC is common to the two triangles BFC, CGB.

11. Wherefore these triangles (*BFC, CGB*) are equal. (*Prop. 4, Book 1.*) And their remaining angles each to each, to which the equal sides are opposite. (*Prop. 4, Book I.*)

12. Therefore the angle FBC is equal to the angle GCB, and the angle BCF to the angle CBG.

13. And since it has been demonstrated that the whole angle ABG is equal to the whole angle ACF. (*Demonstration 5.*)

The parts of which the angles CBG, BCF, are also equal. (*Demonstration 12.*)

14. Therefore the remaining angle ABC, is equal to the remaining angle ACB. (*Axiom 3.*)

Which are the angles at the base of the triangle ABC.

15. And it has been proved that the angle FBC is equal to the angle GCB. (*Demonstration 12.*)

Which are the angles upon the other side of the base.

CONCLUSION. Therefore, the angles at the base, &c. (*See Enunciation.*) Which was to be shewn.

COROLLARY. Hence every equilateral triangle is also equiangular.