

each, and the base DE equal to the base FG. (*Construction 3.*)

2. The angle DCE is equal to the angle FAG. (*Prop. 8, Book I.*)

CONCLUSION.—Therefore at the given point A, in the given straight line AB, the angle FAG is made equal to the given rectilineal angle DCE. Which was to be done.

PROPOSITION 24.—THEOREM.

If two triangles have two sides of the one equal to two sides of the other, each to each, but the angle contained by the two sides of one of them, greater than the angle contained by the two sides equal to them of the other, the base of that which has the greater angle shall be greater than the base of the other.

HYPOTHESIS.—Let ABC, DEF, be two triangles, which have,

1. The two sides AB, AC, equal to the two DE, DF, each to each; viz., AB equal to DE, and AC to DF.

2. But the angle BAC greater than the angle EDF.

SEQUENCE.—The base BC shall be greater than the base EF.

CONSTRUCTION.—

1. Let the side DF of the triangle DEF, be greater than its side DE.

2. Then at the point D, in the straight line ED, make the angle EDG equal to the angle BAC. (*Prop. 23, Book I.*)

3. Make DG equal to DF or AC. (*Prop. 3, Book I.*)

4. Join EG GF.

DEMONSTRATION.—1. Because AB is equal to DE, (*Hypothesis 1*), and AC to DG, (*Construction 3*), the two sides BA, AC, are equal to the two ED, DG, each to each.

2. And the angle BAC is equal to the angle EDG. (*Construction 2.*)

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

4. And because DG is equal to DF, (*Construction 3*),

