

NOTE.—We here give the proof of a theorem, necessary to the proof of Prop. XXIV. and applicable to several propositions in Book III.

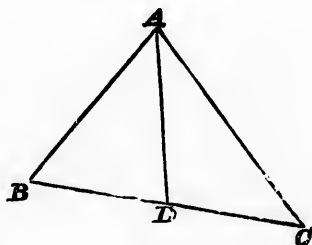
make an



EF the

PROPOSITION D. THEOREM.

Every straight line, drawn from the vertex of a triangle to the base, is less than the greater of the two sides, or than either, if they be equal.



In the $\triangle ABC$, let the side AC be not less than AB .

Take any pt. D in BC , and join AD .

Then must AD be less than AC .

For $\because AC$ is not less than AB ;

$\therefore \angle ABD$ is not less than $\angle ACD$.

I. A. and 18.

But $\angle ADC$ is greater than $\angle ABD$;

I. 16.

$\therefore \angle ADC$ is greater than $\angle ACD$;

$\therefore AC$ is greater than AD .

I. 19.

Q. E. D.

M.

KM.

Ax. 1.

Ax. 1.

I. c.

F.