EE5609 Matrix Theory

Kranthi Kumar P

Download the python code from

https://github.com/kranthiakssy/AI20RESCH14002_PhD_IITH/tree/master/EE5609_Matrix_Theory/Assignment-5

and latex-file codes from

https://github.com/kranthiakssy/AI20RESCH14002_PhD_IITH/tree/master/EE5609_Matrix_Theory/Assignment-5

Assignment-5

GEOLIN

Problem:

Triangle Exercises (1.19):
D is a point on side BC of $\triangle ABC$ such that AD = AC. Show that AB > AD

Solution:

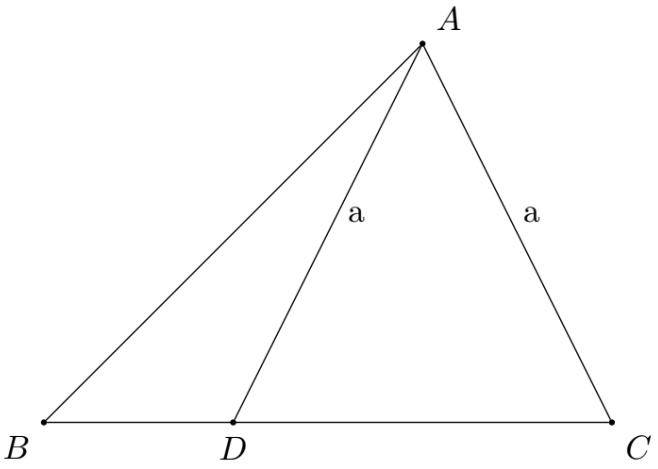

Fig. 0: Triangle generated using LaTeX tikz

The above Fig. 0 shows that, point D placed on side BC of $\triangle ABC$ such that AD = AC
From the figure it is clear that $\angle ADB > 90^o$ and $\triangle ABD$ forms a obtuse triangle.
Hence, as per the properties of triangles

$$AB^2 > AD^2 + BD^2$$

$$\therefore AB > AD$$

for any length of BD.