

Mathematics

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(Chapter – 7) (Triangles)(Exemplar Problems)
(Class – IX)

Exercise 7.3

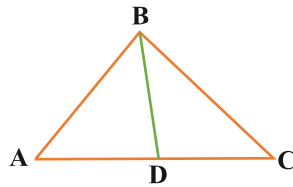
Question 7:

D is any point on side AC of a ΔABC with $AB = AC$. Show that $CD < BD$.

Answer 7:

Given: In ΔABC , $AB = AC$.

To Prove: $CD < BD$.



Proof: In ΔABC , $AB = AC$ [\because Given]

$\Rightarrow \angle C = \angle ABC$ [\because Angles opposite to equal sides]

$\Rightarrow \angle C > \angle CBD$ [$\because \angle ABC > \angle CBD$]

Now, In ΔBDC , $\angle C > \angle CBD$ [\because Proved above]

$\Rightarrow CD < BD$

[\because Greater angle has longer side opposite to it]

Hence Proved.

