ODM EDUCATIONAL GROUP
Changing your Tomorrow

PERIOD 8

MATHEMATICS

CHAPTER NUMBER :~ 7
CHAPTER NAME :~ TRIANGLES

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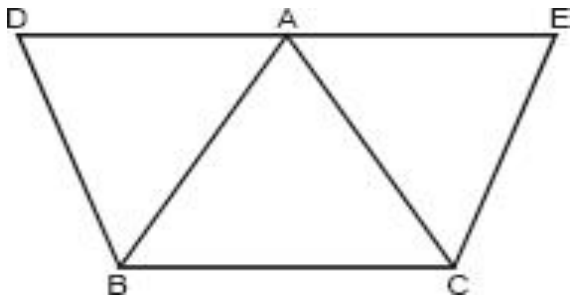
PREVIOUS KNOWLEDGE TEST

1. In the given figure, equilateral ΔABD and ΔACE are drawn on the sides of a ΔABC. Prove that CD = BE



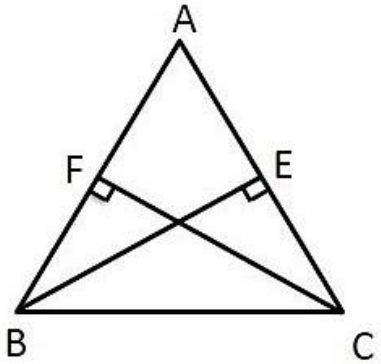
LEARNING OUTCOME:-

1.Students will be able to learn more on SSS congruence and RHS congruence.

2. Students will develop the application knowledge of RHS and SSS congruence.

Ex 7.3,4

BE and CF are two equal altitudes of a triangle ABC . Using RHS congruence rule , prove that the triangle ABC is isosceles .



Given:

Given BE is a altitude,

So, $\angle AEB = \angle CEB = 90^\circ$ ...(1)

Also, CF is a altitude,

So, $\angle AFC = \angle BFC = 90^\circ$ ...(2)

Also, BE = CF ...(3)

To prove: Δ ABC is isoceles

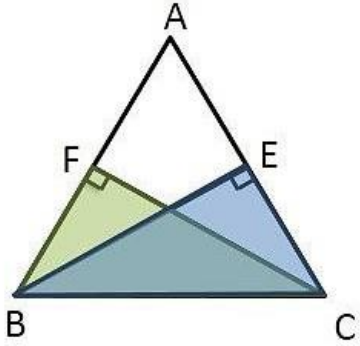
In ΔBCF and ΔCBE

$\angle BFC = \angle CEB = 90^\circ$ *(Both 90°)*

$BC = CB$ *(Common)*

$FC = EB$ *(From (3))*

$\Delta BCF \cong \Delta CBE$ *(RHS congruence rule)*



$\therefore \angle FBC = \angle ECB$ *(CPCT)*

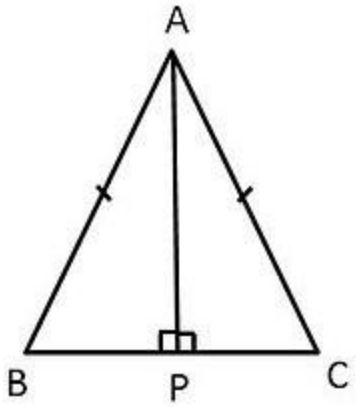
So, $\angle ABC = \angle ACB$

$AB = AC$ *(Sides opposite to equal angles is equal)*

So, ΔABC is an isosceles triangle

Ex 7.3,5

ABC is an isosceles triangle with AB = AC . Draw AP ⊥ BC to show that $\angle B = \angle C$.



Given:

Since Δ ABC is isosceles

AB = AC ...(1)

Given AP ⊥ BC ,

So, $\angle APB = \angle APC = 90^\circ$ ...(2)

To prove: ∠ B = ∠ C

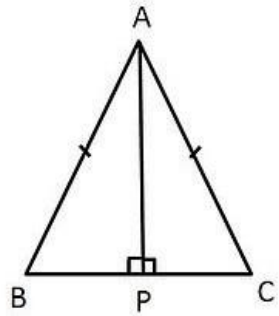
In ΔABP and ΔACP

$\angle APB = \angle APC = 90^\circ$ *(From (2))*

$AB = AC$ *(From (1))*

$AP = AP$ *(Common)*

$\Delta ABP \cong \Delta ACP$ *(RHS congruence rule)*



So, $\angle B = \angle C$ *(CPCT)*

Hence proved

HOMEWORK ASSIGNMENT

Exercise 7.3
Question number 3,4,5

AHA

1.If two sides of a triangle are unequal then prove that the angles opposite to the longer sides is larger.

THANKING YOU

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