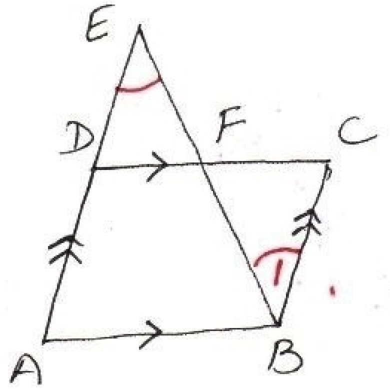
(8)



to show $\triangle ABE \sim \triangle CFB$

proof $AD \parallel BC$ (opp. Sides of ∥gm)

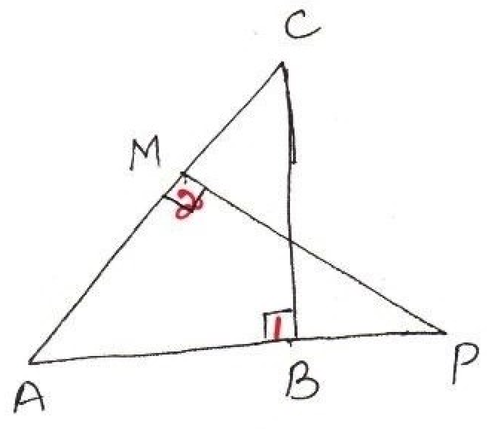
$\Rightarrow AE \parallel BC$

$\angle E = \angle 1$ (alternate interior ∠s)

$\angle A = \angle C$ (opp. ∠s of a ∥gm)

$\therefore \triangle ABE \sim \triangle CFB$ by AA Sim.

(9)



To Prove $\triangle ABC \sim \triangle AMP$

$$\frac{CA}{PA} = \frac{BC}{MP}$$

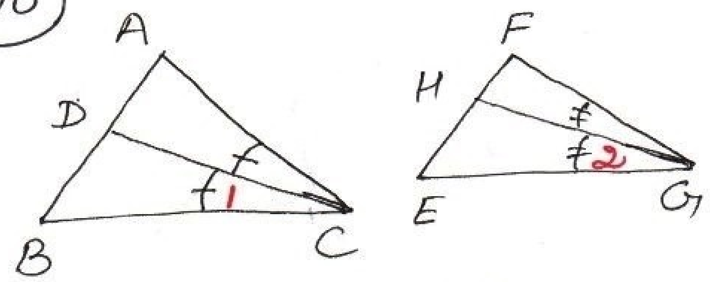
proof $\angle A = \angle A$

$\angle 1 = \angle 2 = 90^\circ$

$\therefore \triangle ABC \sim \triangle AMP$ by AA Sim.

$$\Rightarrow \frac{CA}{PA} = \frac{BC}{MP}$$

(10)



to prove $\dfrac{CD}{GH} = \dfrac{AC}{FG}$

$\triangle DCB \sim \triangle HGE$

$\triangle DCA \sim \triangle HGF$

proof

$\triangle ABC \sim \triangle FEG$

$\Rightarrow \angle A = \angle F \quad \ldots (I)$

$\angle B = \angle E \quad \ldots (II)$

$\angle ACB = \angle FGE \quad \ldots (III)$

$\frac{1}{2}\angle ACB = \frac{1}{2}\angle FGE$

$\Rightarrow \angle 1 = \angle 2$

$\triangle DCB \sim \triangle HGE$ by AA Sim.

$\left[\begin{array}{l} \angle 1 = \angle 2 \\ \angle B = \angle E \end{array}\right]$

Sim. $\triangle DCA \sim \triangle HGF$

$$\Rightarrow \frac{CD}{GH} = \frac{AC}{FG}$$