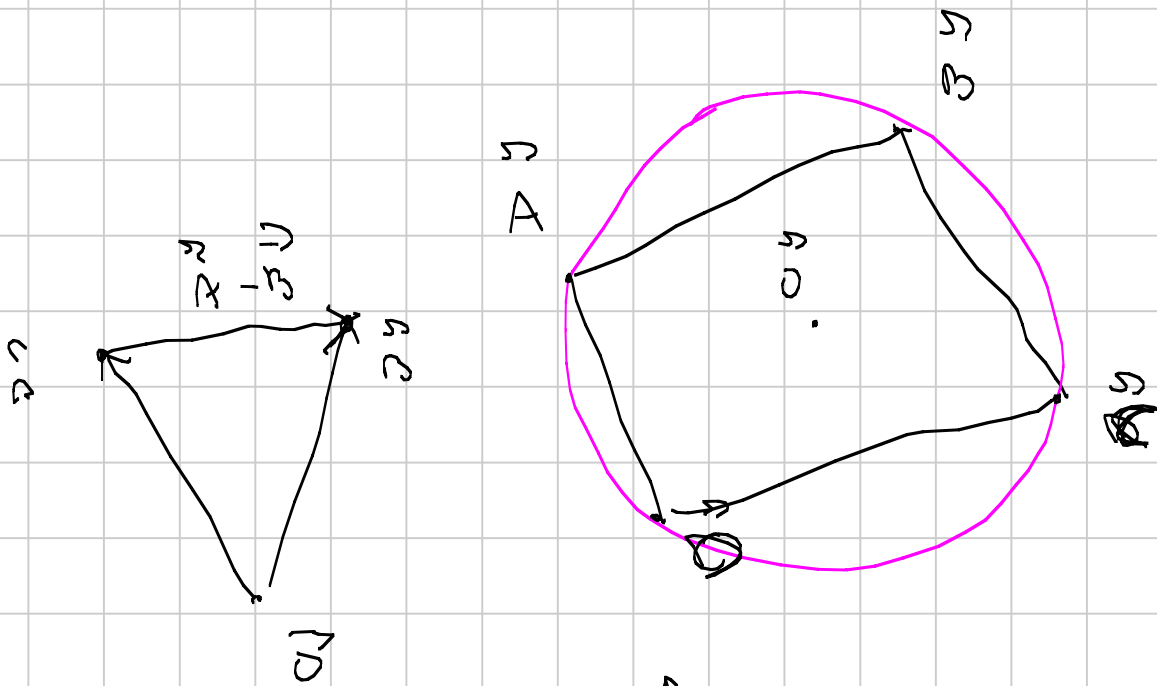


GEOMETRIA MATTUTINA

Titolo nota

29/05/2007

ORIGINE NEL CIRCOCENTRO DI TRE VENTILI A 450



$$\begin{aligned}
 \vec{r}_1 &= \vec{r}_1 \\
 \vec{r}_2 &= \vec{r}_2 \\
 \vec{r}_3 &= \vec{r}_3 \\
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 \end{aligned}$$

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 \vec{r}_{49} &= \vec{r}_{49} \\
 \vec{r}_{50} &= \vec{r}_{50}
 \end{aligned}$$

$$\vec{X} \quad \vec{A} + \vec{B} + \vec{C} + \vec{D} - \vec{X}$$

~~X~~ →

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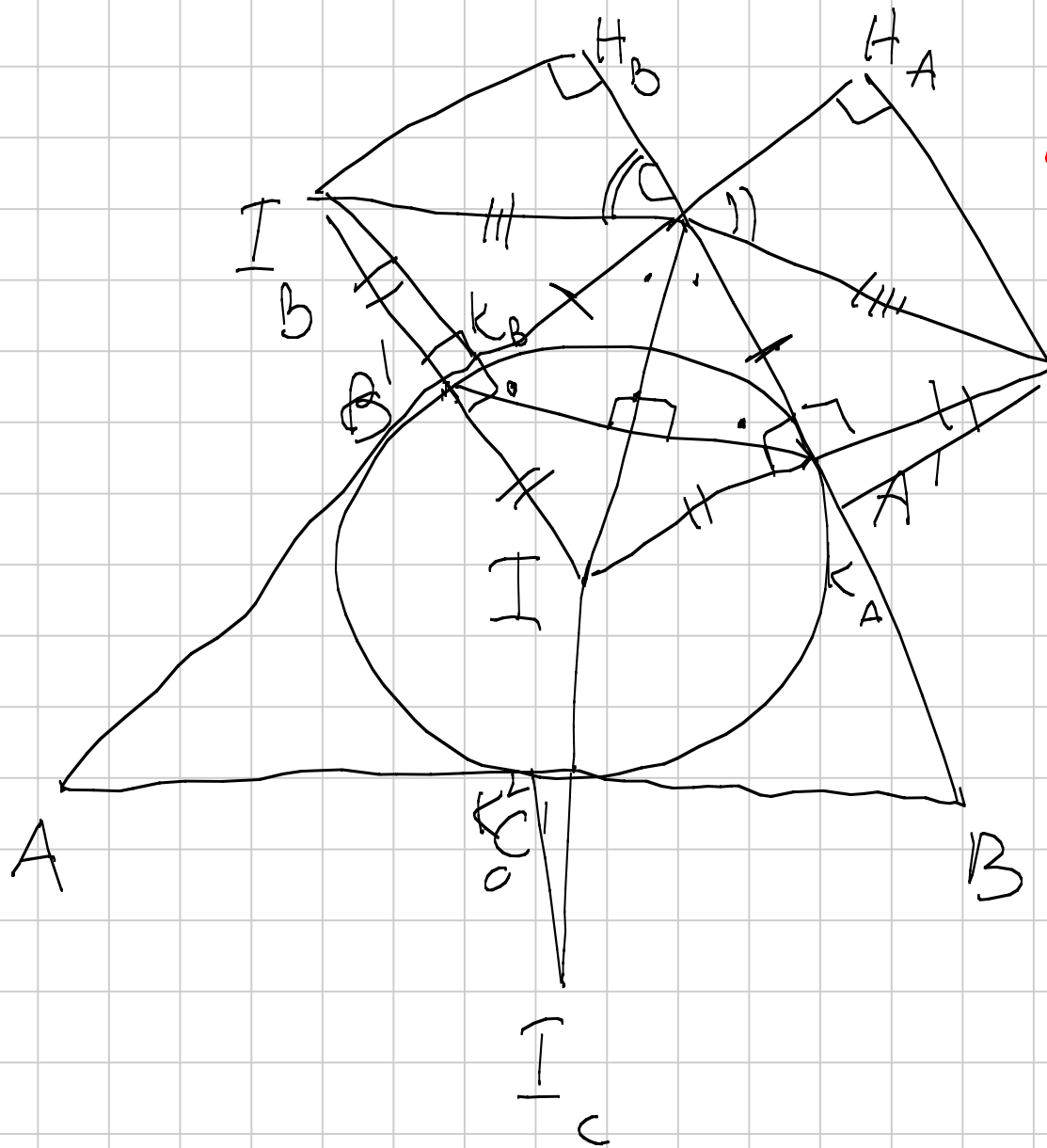
⊖

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X →

$$\vec{A} + \vec{B} + \vec{C} + \vec{D} = \vec{T}$$

$$-X + T$$



ex) $I_{BC} = I_{A'C}$

$I_{BB'C} = I_{A'A'C}$

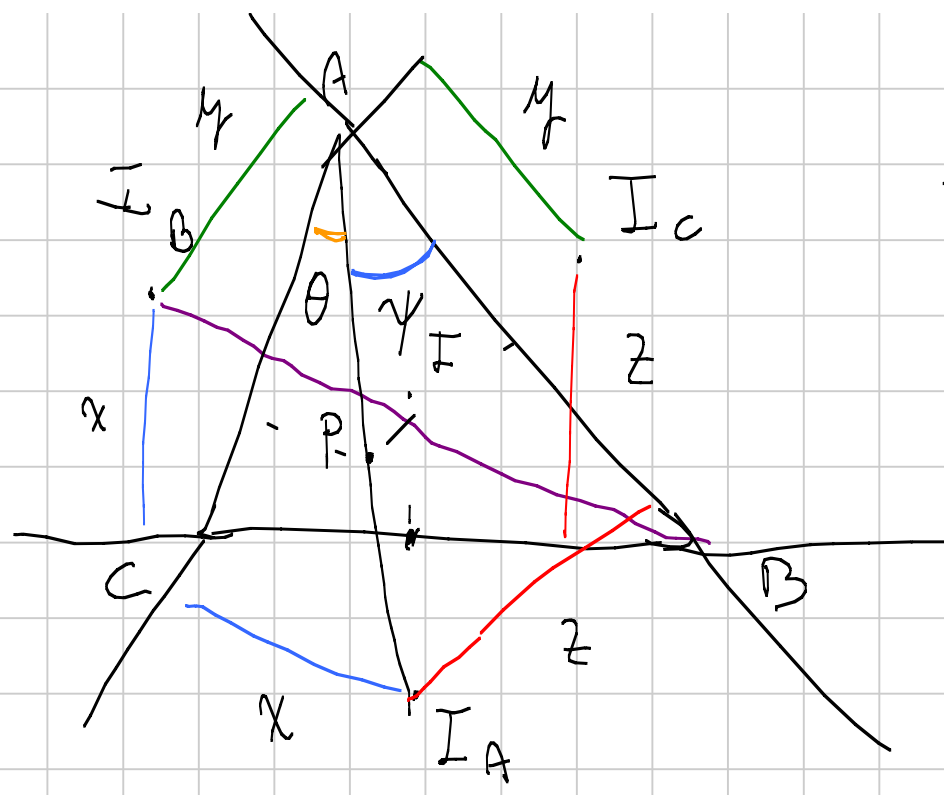
$I_{BCH_B} = I_{ACH_A}$

$AB' \cdot CA' \cdot BC' = B'C \cdot A'B \cdot C'A$

$$\text{rem } \theta = \frac{x}{AI_A}$$

$$\text{rem } \gamma = \frac{z}{AI_A}$$

$$\frac{\text{rem } \theta}{\text{rem } \gamma} = \frac{x}{z}$$



$$P \in AI_A$$

$$\frac{d(P, AC)}{d(P, AB)} = \frac{x}{z}$$

$$Q \in AI_A \cap BI_B$$

$$\frac{d(Q, AC)}{d(Q, AB)} = \frac{x}{z}$$

$$\frac{d(Q, AB)}{d(Q, BC)} = \frac{y}{x}$$

$$\frac{d(Q, AC)}{d(Q, BC)} = \frac{1}{2} \Rightarrow Q \in CI_c$$

$$AD = CD$$

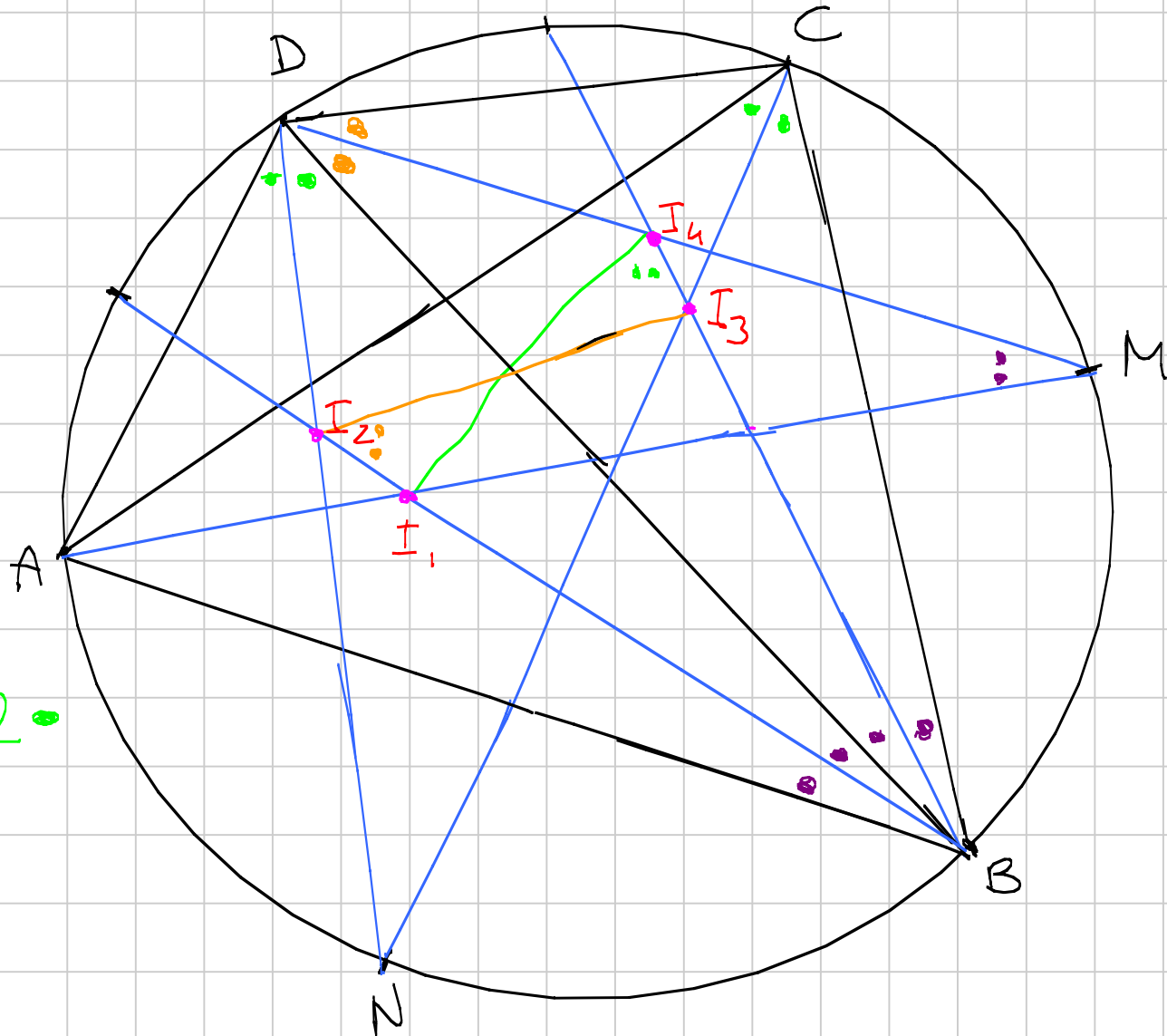
$$\widehat{DMA} = \widehat{DBA} = 2\bullet$$

$$I_1 B M I_4$$

$$I_1 \widehat{I_4 B} = \widehat{I_1 A B} = \widehat{A C B} = 2\bullet$$

$$2\bullet = 2\bullet$$

$$AB = BC$$



$$\frac{AI_1}{r_1} = \frac{1}{\sin \theta} = \frac{AI_2}{r_2} = \frac{AI_3}{r_3} = \frac{AI_4}{r_4}$$

$$r_1 \cdot r_2 = r_3 \cdot r_4$$

$$\frac{r_1}{r_3} = \frac{r_4}{r_2}$$

$$\frac{AD}{AC} = \frac{AB}{AC}$$

$$BD = DC$$

$$\text{TR: } \widehat{GCB} = \widehat{BCF}$$

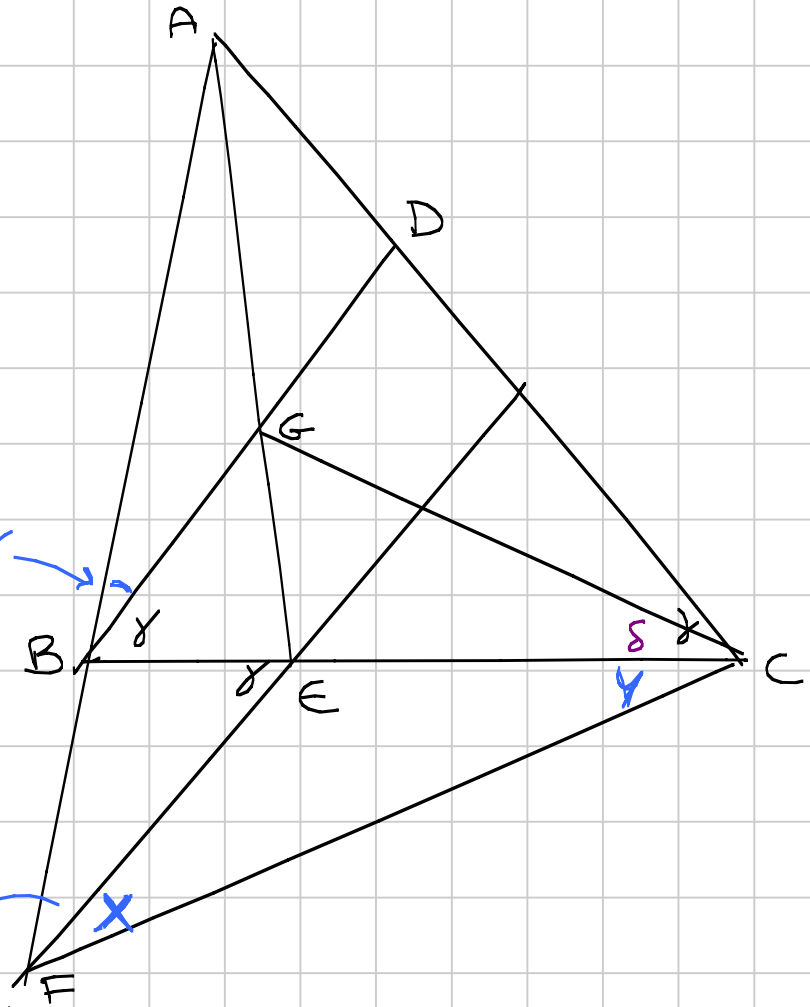
ABC G

AFG E

~~$$\frac{\sin \angle CAE}{\sin \angle EAB} \cdot \frac{\sin \angle B - \gamma}{\sin \gamma} \cdot \frac{\sin \delta}{\sin \delta - \delta} = 1$$~~

~~$$\frac{\sin \angle CAE}{\sin \angle EAB} \cdot \frac{\sin \angle B - \gamma}{\sin \gamma} \cdot \frac{\sin \hat{\gamma}}{\sin \gamma} = 1$$~~

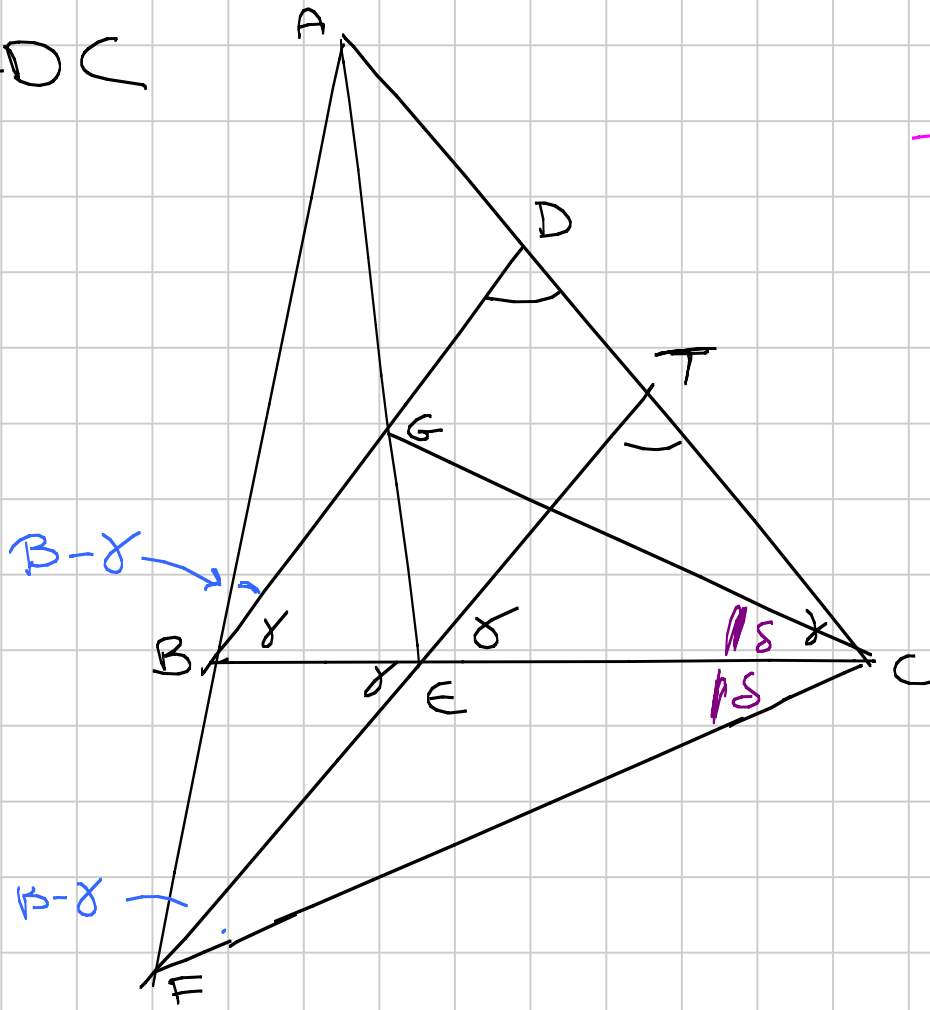
$$\frac{\sin \delta}{\sin \delta - \delta} = \frac{\sin \hat{\gamma}}{\sin \gamma} = \boxed{\frac{\sin \hat{\gamma}}{\sin \delta - \hat{\gamma}}}$$



$$X + \gamma = \delta$$

$$\hat{\gamma} = \delta$$

$$BD = DC$$



$$CGD \sim TFC$$

$$\frac{GD}{DC} = \frac{CF}{FE}$$

$$\frac{GD}{DC} = \frac{GD}{BD} = \frac{CF}{FE}$$

(parallelismo BD, FE)

$$\angle E = \angle C$$

$$\frac{CF}{FE} = \frac{CF}{FC}$$