Zadatak 39. Kolika je površina četverokuta kojem su vrhovi sjecišta elipse $\frac{x^2}{20}+\frac{y^2}{5}=1$ i hiperbole $\frac{x^2}{12}-\frac{y^2}{3}=1$?

Rješenje.

$$E \ \ldots \ \frac{x^2}{20}+\frac{y^2}{5}=1 \quad / \cdot 20$$

$$H \ \ldots \ \frac{x^2}{12}-\frac{y^2}{3}=1 \quad / \cdot 12$$

$$H \cap E \ \ldots \ \left.\begin{array}{l} x^2+4y^2=20 \\ x^2-4y^2=12 \end{array}\right\} +$$

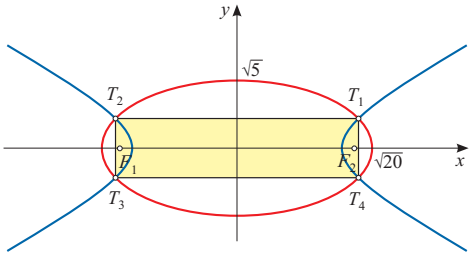
$$2x^2=32$$

$$x^2=16 \implies \boxed{x_0=\pm 4}$$

$$16+4y^2=20$$

$$4y^2=4$$

$$y^2=1 \implies \boxed{y_0=\pm 1} \implies \boxed{T_{1,2,3,4}(\pm 4,\pm 1)}$$



$$\boxed{P=} \ 2x_0 \cdot 2y_0 = 8 \cdot 2 \ \boxed{=16}$$