Esercizio 7

$P_1\left(-2; \frac{2\sqrt{6}}{3}\right)$ $P_2(-3; 1)$

$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$

$$\begin{cases} \frac{4}{a^2} + \frac{24}{9}\cdot\frac{1}{b^2} = 1 \\ \frac{9}{a^2} + \frac{1}{b^2} = 1 \end{cases}$$

$\frac{1}{a^2} = H$ $\frac{1}{b^2} = K$

$$\begin{cases} 4H + \frac{24}{9}K = 1 \\ 9H + K = 1 \end{cases} \Rightarrow \begin{cases} 4H - 24H + \frac{24}{9} = 1 \\ K = -9H + 1 \end{cases} \Rightarrow \begin{cases} 36H - 216H + 24 = 9 \\ K = -9H + 1 \end{cases}$$

$$\Rightarrow \begin{cases} 180H = 15 \\ K = -9H + 1 \end{cases} \Rightarrow \begin{cases} H = \frac{1}{12} \\ K = \frac{1}{4} \end{cases}$$

$\frac{x^2}{12} + \frac{y^2}{4} = 1$