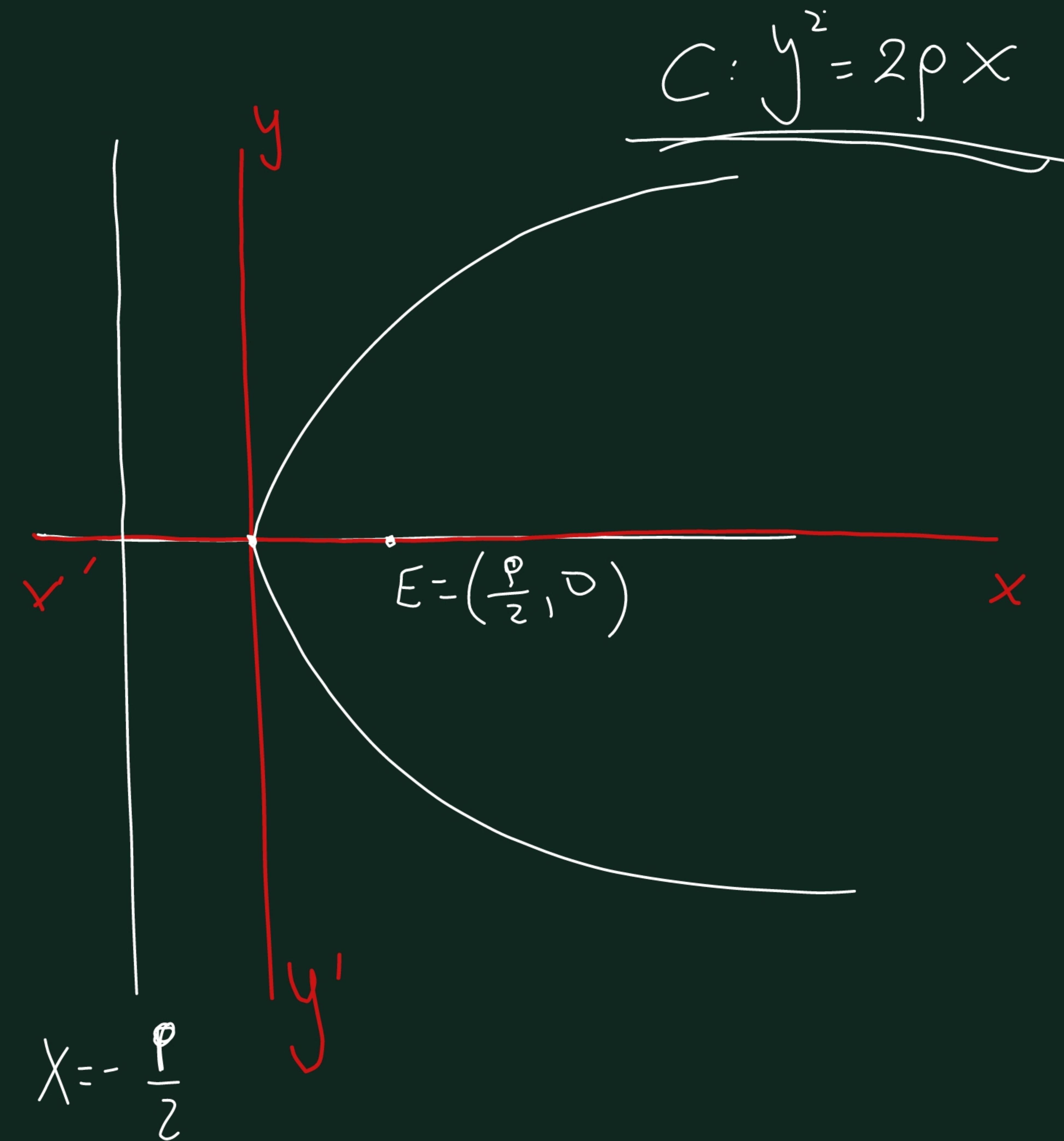
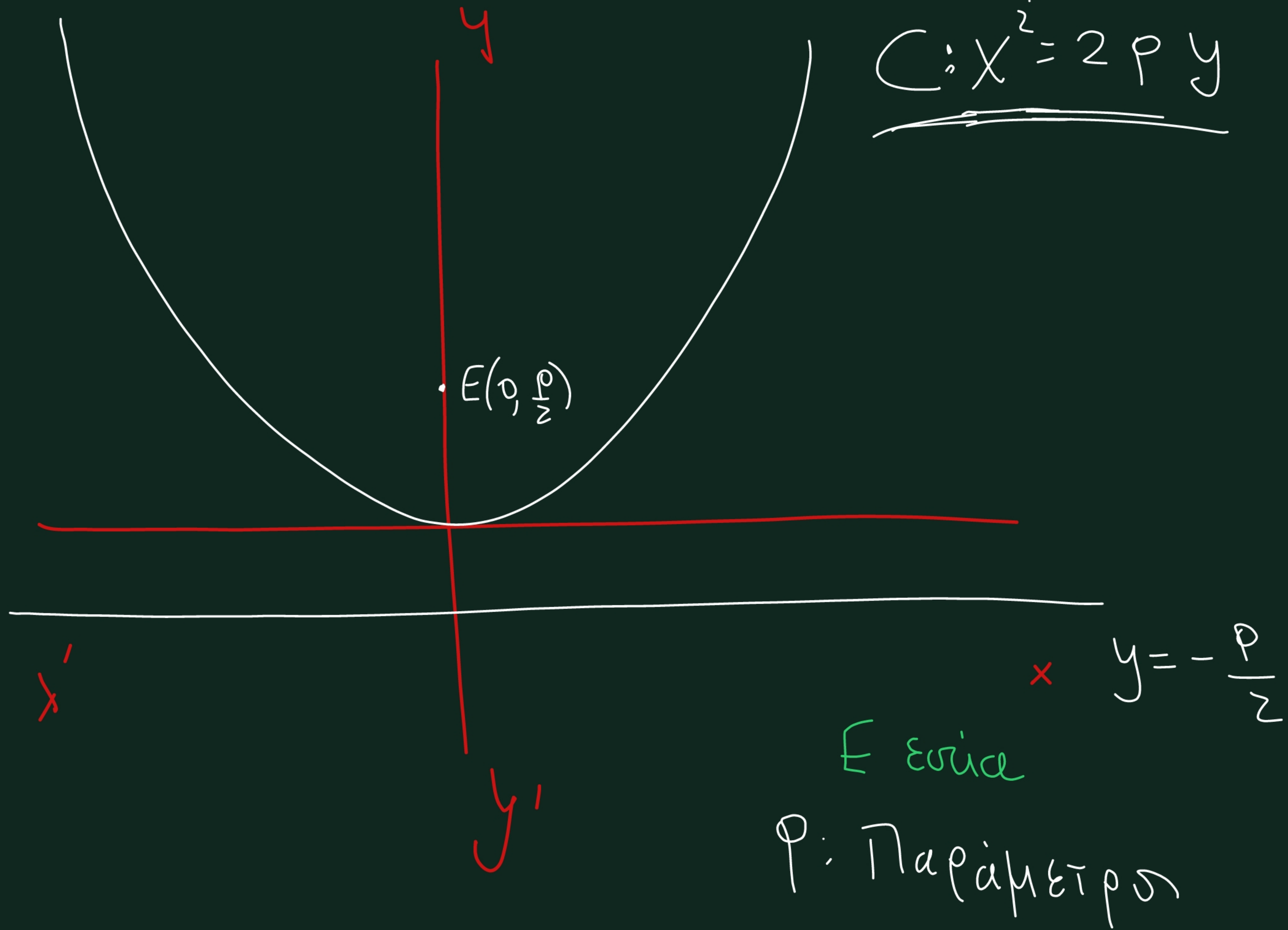


Παραβολή



2) iii)

σ. 99

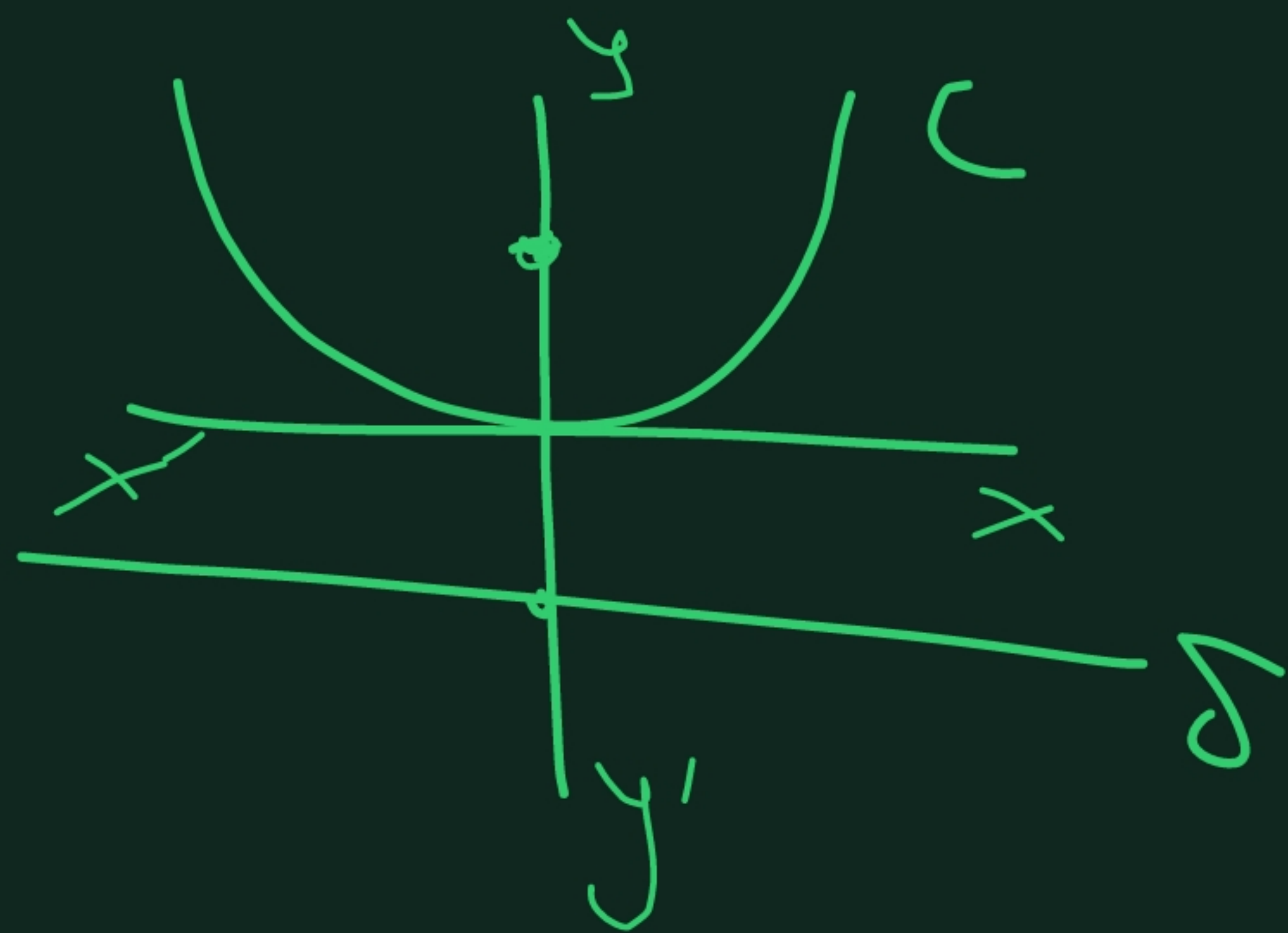
$$y = \frac{1}{4} x^2 \quad (\stackrel{4}{=})$$

$$C: x^2 = 4 \cdot y$$

exw $C: x^2 = 2py$

$$\Rightarrow 2p = 4 \quad (\stackrel{2}{=})$$

$p = 2$



$$E\left(0, \frac{p}{2}\right) = E(0, 1)$$

$$\delta: y = -\frac{p}{2} = -1 \quad \delta: y = -1$$

2) i)

5.99

$$y = \frac{1}{4a} \cdot x^2 \xrightarrow{\cdot 4a} C: x^2 = 4a \cdot y$$

Exw $C: x^2 = 2py$

$$\Rightarrow 2p = 4a \stackrel{:2}{=} 2 \Rightarrow p = 2a$$

Apa

k

$$E\left(0, \frac{p}{2}\right) = E\left(0, \frac{2a}{2}\right) = E(0, a)$$
$$\delta: y = -\frac{p}{2} \Rightarrow \delta: y = -\frac{2a}{2} \Rightarrow \delta: y = -a$$

5) i)

σ. 99

C: $y = \frac{1}{4}x^2$ Να εφάσσει την C

$C: x^2 = 4y \xrightarrow{p=2} \varepsilon: x_1 \cdot x = p(y_1 + y)$

i) $\varepsilon // \delta: y = x + 1 \Rightarrow$

εxω $\varepsilon // \delta \Rightarrow \lambda_\varepsilon = \lambda_\delta \Rightarrow \boxed{\lambda_\varepsilon = 1}$

εxω $\varepsilon: x_1 \cdot x = p(y_1 + y) \Rightarrow x_1 \cdot x = p y_1 + p \cdot y \Rightarrow$

$\varepsilon: p \cdot y - x_1 \cdot x + p \cdot y_1 \Rightarrow \lambda_\varepsilon = \frac{-A}{B} = \frac{-p}{-x_1} = \frac{p}{x_1} \Rightarrow \lambda_\varepsilon = \frac{p}{x_1} \Rightarrow$

$\lambda_\varepsilon = \frac{2}{x_1} \xrightarrow{\lambda_\varepsilon=1} 1 = \frac{2}{x_1} \Leftrightarrow \boxed{x_1=2}$ Άρα $\xrightarrow{x_1=2} 4 = 4 \cdot y \Rightarrow \boxed{y=1}$

Άρα σημείο εφάσσης $A(2, 1)$

$\varepsilon: 2 \cdot x = 2(1+y) \Rightarrow$

$\varepsilon: 2x = 2 + 2y \Rightarrow$
 $2x - 2 = 2y \Rightarrow$

$\varepsilon: y = x - 1$

$$S) ii) \quad C: X^2 = 4y \quad \left\{ \begin{array}{l} \Rightarrow 2p = 4 \Rightarrow p = 2 \\ c: X^2 = 2py \end{array} \right.$$

$$\varepsilon \perp \delta: y = -2x, \quad \varepsilon \perp \delta \Rightarrow \lambda_\varepsilon \cdot \lambda_\delta = -1 \Rightarrow \lambda_\varepsilon(-2) = -1$$

$\downarrow$
ε φωρ

$\lambda_\varepsilon = 1/2$

γεν. μορφή $\varepsilon: X_1 \cdot X = p(y_1 + y) \quad (\overset{p=2}{\Rightarrow}) \quad \varepsilon: X_1 \cdot X = 2(y_1 + y) \Rightarrow X_1 \cdot X = 2y_1 + 2y \Rightarrow$

$$-X_1 \cdot X + 2y + 2y_1 = 0 \rightarrow \lambda_\varepsilon = \frac{-A}{B} = \frac{-(1-X_1)}{2} = \frac{X_1}{2} \Rightarrow \lambda_\varepsilon = \frac{X_1}{2} \left\{ \begin{array}{l} \Rightarrow \frac{X_1}{2} = \frac{1}{2} \Rightarrow X_1 = 1 \end{array} \right.$$

$\lambda_\varepsilon = \frac{1}{2}$

$$C \xrightarrow{X_1=1} L^2 = 4y_1 \Rightarrow y_1 = 1/4$$

Άρα $\varepsilon: X = 2 \cdot (\frac{1}{4} + y)$

